

**DRAFT**  
**The Village at Main Street Project**  
**Initial Study/Mitigated Negative Declaration**  
**City of Oakley, Contra Costa County, California**

Prepared for:  
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Date: February 4, 2019

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## SECTION 1: INTRODUCTION

The purpose of this Initial Study/Mitigated Negative Declaration (IS/MND) is to identify any potential environmental impacts from implementation of The Village at Main Street Project in the City of Oakley, California. Pursuant to California Environmental Quality Act (CEQA) Guidelines Section 15367, the City of Oakley (City) is the lead agency in the preparation of this IS/MND and any additional environmental documentation required for the project. The City has discretionary authority over the proposed project. The intended use of this document is to determine the level of environmental analysis required to adequately prepare the project IS/MND and to provide the basis for input from public agencies, organizations, and interested members of the public.

The remainder of this section provides a brief description of the project location and the characteristics of the project. Section 2 includes an environmental checklist giving an overview of the potential impacts that may result from project implementation. Section 3 elaborates on the information contained in the environmental checklist, along with justification for the responses provided in the environmental checklist.

### 1.1 - Project Location

The project site is located in the City of Oakley, Contra Costa County, California (Exhibit 1 and Exhibit 2). The 20-acre project site is bounded by a private roadway (west), Main Street (north), the Cypress Shopping Center (east), and The Oaks multi-family residential complex (south). The project site is located on the Jersey Island, California United States Geological Survey (USGS) 7.5-Minute Quadrangle, Township 2 North, Range 2 West, Section 22 (Latitude 38° 0' 13 North; Longitude 121° 44' 5" West).

### 1.2 - Environmental Setting

The project site contains flat relief and is at an elevation of 10 feet above mean sea level. The western portion of the project site contains vineyards while the eastern portion contains undeveloped land and mature trees. Exhibit 3 provides a photograph of the project site.

The project frontage with Main Street is unimproved. Walls are present along the property lines with the Cypress Shopping Center and Carol Lane.

The BNSF Railway main line between Richmond and Stockton is located on the opposite side of Main Street. A small rail yard is present and used for the storage of freight cars. The project is approximately 0.5 mile from Big Break<sup>1</sup>.

The site is designated "Commercial" by the City of Oakley General Plan and zoned "C (Commercial)" by the Oakley Zoning Ordinance.

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<sup>1</sup> Big Break is a small bay along the San Joaquin River that formed following a levee breach in 1928

## 1.3 - Project Description

### 1.3.1 - Project Summary

The project applicant (MLC Holdings) is proposing to rezone and subdivide the site to allow the development of 154 residential lots, a park, a bio retention basin, and open space. Table 1 summarizes the project. Exhibit 4 depicts the vesting tentative map.

**Table 1: Project Summary**

End Use	Characteristics
Single-family Residential	154 dwelling units
Park	0.6 acre
Bio Retention Basin	42,511 square feet
Open Space	3 parcels—15,226 square feet
Source: MLC Holdings 2018.	

### 1.3.2 - Design and Appearance

The residences would consist of 2-story structures ranging in size from 1,837 to 2,532 square feet. The structures would stand 27 feet to 30 feet, 2 inches above finished grade. The structures would employ architectural elements including flat concrete tile roofing, stucco finishes, cementitious board and batt siding, decorative outlooker, enhanced stills, and stucco finish trim.

### 1.3.3 - Circulation

The project's internal circulation system would consist of a network of six through streets and one cul-de-sac. External vehicular access would be taken from two points on Main Street. The Main Street access points would be gated. The streets would be privately owned and maintained.

### 1.3.4 - Storm Drainage

A storm drainage system consisting of inlets and underground piping would convey runoff to the two bioretention basins. The basins would detain runoff for percolation into the soil. The storm drainage system would be privately owned and maintained. Runoff from the basin would be conveyed by a network of 18-inch and 24-inch-diameter pipes to the southwestern corner of the project site and discharged into an existing 42-inch-diameter storm drainage pipe, which runs parallel to the southern boundary of the project site. The storm drainage system would be designed to detain and meter the release of peak runoff in order to avoid inundating downstream waterways.

### 1.3.5 - Utilities

The project would be served with potable water provided by the Diablo Water District and sewer service provided by the Iron Horse Sanitary District. Marin Clean Energy would provide electrical

service and Pacific Gas and Electricity Company (PG&E) would provide natural gas service. All utility connections would be underground.

### 1.3.6 - General Plan Amendment and Rezone

The General Plan Amendment proposes to change the project site designation from Commercial/Light Industry to Single Family Residential-Low. The project proposes to rezone the project site from General Commercial to Planned Development.

## 1.4 - Required Discretionary Approvals

The proposed project would require the following discretionary approvals:

- General Plan Amendment
- Rezone
- Vesting Tentative Map
- Design Review

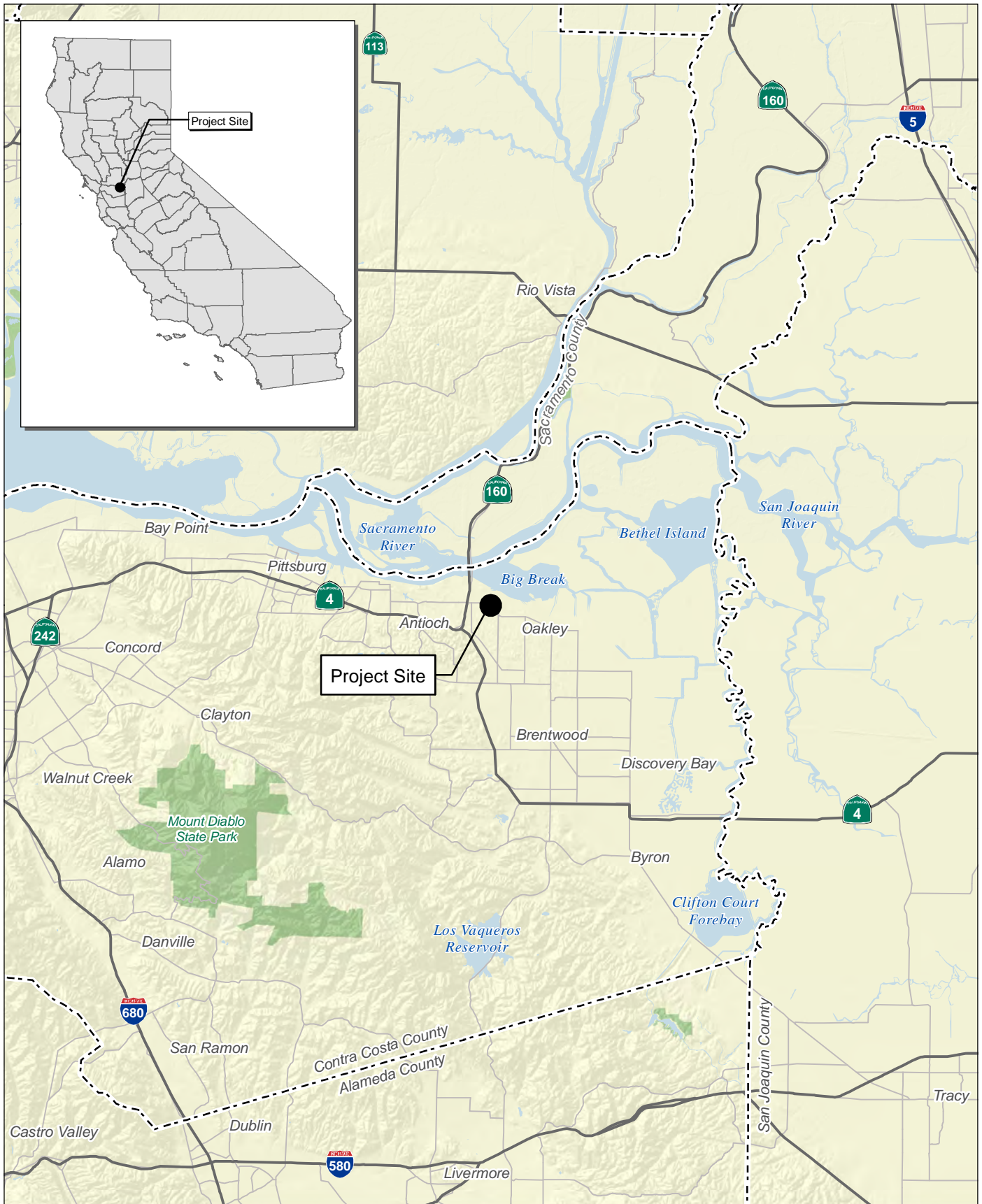
## 1.5 - Intended Uses of this Document

This IS/MND has been prepared to determine the appropriate scope and level of detail required in completing the environmental analysis for the proposed project. This document will also serve as a basis for soliciting comments and input from members of the public and public agencies regarding the proposed project. The Draft IS/MND will be circulated for a minimum of 30 days, during which period comments concerning the analysis contained in the IS/MND should be sent to:

Joshua McMurray, Planning Manager  
Planning and Zoning Department  
3231 Main Street  
Oakley, CA 94561  
Phone: 925.625.7000  
Email: mcmurray@ci.oakley.ca.us

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Source: Census 2000 Data, The CaSIL

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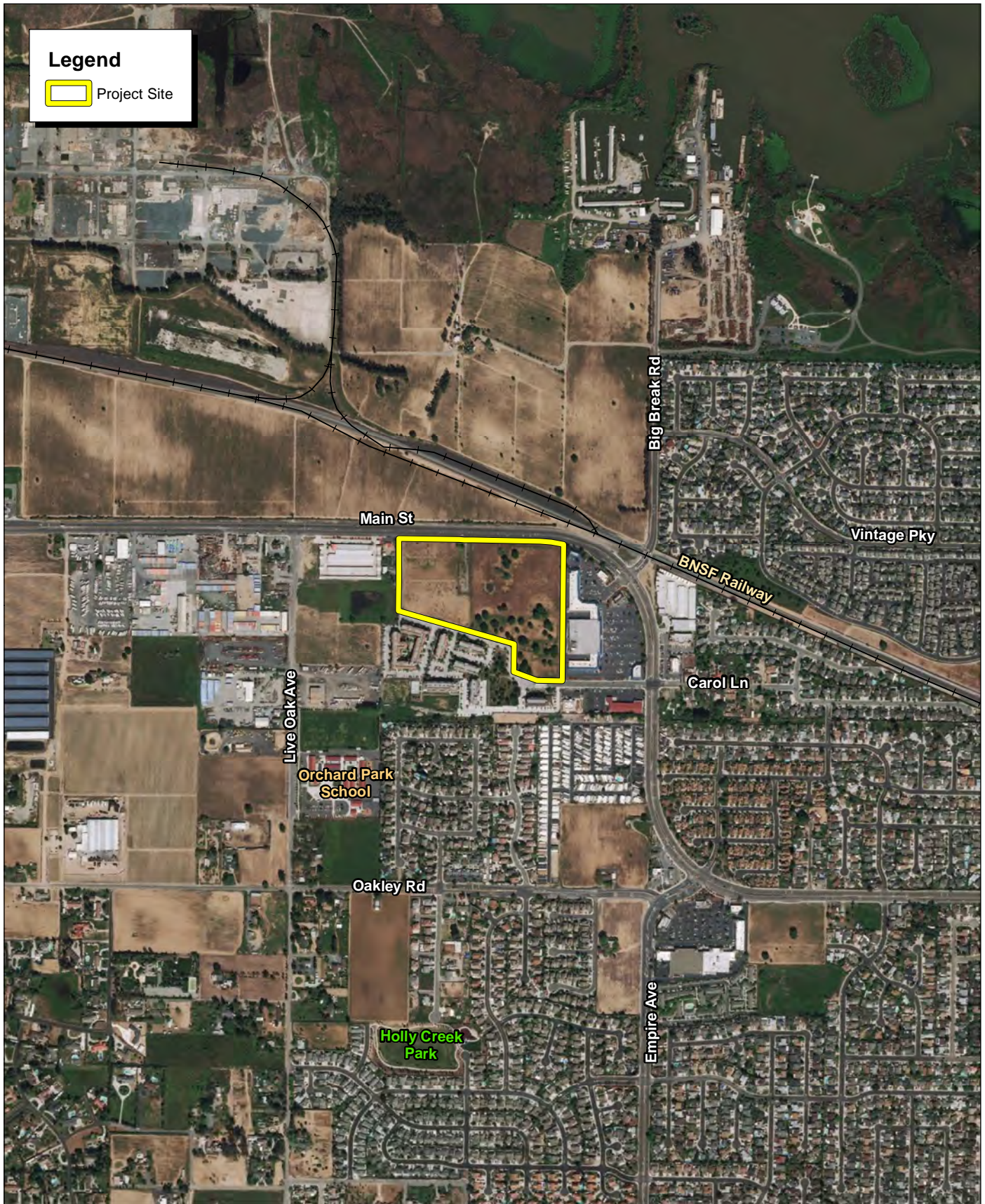


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## Exhibit 1 Regional Location Map

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Source: ESRI Aerial Imagery.

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## Exhibit 2 Local Vicinity Map Aerial Base

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View of project site from Main Street.

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## SECTION 2: ENVIRONMENTAL CHECKLIST AND ENVIRONMENTAL EVALUATION

### Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a “Potentially Significant Impact” as indicated by the checklist on the following pages.

<input type="checkbox"/>	Aesthetics	<input type="checkbox"/>	Agriculture and Forestry Resources	<input type="checkbox"/>	Air Quality
<input type="checkbox"/>	Biological Resources	<input type="checkbox"/>	Cultural Resources	<input type="checkbox"/>	Geology/Soils
<input type="checkbox"/>	Greenhouse Gas Emissions	<input type="checkbox"/>	Hazards/Hazardous Materials	<input type="checkbox"/>	Hydrology/Water Quality
<input type="checkbox"/>	Land Use/Planning	<input type="checkbox"/>	Mineral Resources	<input type="checkbox"/>	Noise
<input type="checkbox"/>	Population/Housing	<input type="checkbox"/>	Public Services	<input type="checkbox"/>	Recreation
<input type="checkbox"/>	Transportation/Traffic	<input type="checkbox"/>	Tribal Cultural Resources	<input type="checkbox"/>	Utilities/Services Systems
<input type="checkbox"/>	Mandatory Findings of Significance				

### Environmental Determination

On the basis of this initial evaluation:

- ☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- ☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- ☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- ☐ I find that the proposed project MAY have a “potentially significant impact” or “potentially significant unless mitigated” impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measure based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- ☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Date: February 4, 2019 Signed: Joshua McMurray, Planning Manager

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
<b>1. Aesthetics</b> <i>Would the project:</i>				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic building within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

## Environmental Evaluation

Would the project:

**a) Have a substantial adverse effect on a scenic vista?**

**Less than significant impact.** The City of Oakley General Plan identifies natural landscape features such as the Delta, Dutch Slough, Marsh Creek, agricultural and other open space lands, as well as the views of Mount Diablo as scenic resources. Of the aforementioned features, only Mount Diablo is visible from the project site. In the project vicinity, views of Mount Diablo are southwest facing. Thus, land uses to the south and west would not have their views of Mount Diablo obstructed by the project. Land uses to the east consist of a shopping center with a tall block wall along the property line. This wall partially obstructs views of Mount Diablo and the project would not change this existing condition. Land uses to the north consist of Main Street and the BNSF Railway. Because the rooflines of the proposed residential units would range from 27 to 30 feet, 2 inches above finished grade, views of Mount Diablo from vantage points to the north would experience little to no change. Thus, there would be no substantial adverse effect on an existing scenic vista. The impact would be less than significant.

**b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic building within a state scenic highway?**

**No impact.** State Route 160 (SR-160) is located 0.80-mile west of the project site. SR-160 is classified as an “Eligible” State Scenic Highway. The project site is not visible from the freeway because of the intervening topography, vegetation, or structures. This condition precludes the potential for substantial damage to scenic resources within view of a state scenic highway. No impact would occur.

**c) Substantially degrade the existing visual character or quality of the site and its surroundings?**

**Less than significant impact.** The western portion of the project site contains vineyards while the eastern portion contains undeveloped land and mature trees. The project frontage with Main Street is unimproved. The property is bounded by a commercial shopping center to the east, a public storage facility to the west, and a retirement housing community to the south. Much of the land surrounding the site to the west, east, and south is developed.

The proposed project would develop 154 single-family residences on the project site, along with a park, two bioretention basins, and an internal roadway network. The residences would range from 27 feet to 30 feet, 2 inches above finished grade. The residences would employ a contemporary appearance.

The City of Oakley General Plan contemplates commercial use on the project site. The proposed project involves a General Plan Amendment to re-designate the project site from commercial/light industry use to residential use. From a visual character perspective, the General Plan Amendment has no significant implications as the project site would support residential uses instead of commercial/light industry uses and, thus, would still be urban in appearance.

In sum, the proposed project would develop residential uses on an infill site within the Oakley city limits that is envisioned to support urban development. The project would be similar in visual with surrounding land uses and, thus, be compatible. The project would not substantially degrade the visual character of the project site or its surroundings. Impacts would be less than significant.

**d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?**

**Less than significant impact.** The project proposes to develop 154 residential units with associated parking on a site containing vineyards, while the eastern portion contains undeveloped land and mature trees. As a result, the project would increase the amount of light and glare from the project site, compared with existing conditions. The new sources of light would come from interior and exterior lighting, as well as some glare reflecting off building surfaces. The proposed project would be compliant with the Residential Design Guidelines, including lighting standards that require the use of the City's standard for residential street lights and limits residential lighting for security purpose. Compliance with the City's standards would ensure the project would not adversely affect day or nighttime views in the area. The impacts would be less than significant.

## Mitigation Measures

None.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
<b>2. Agriculture and Forestry Resources</b> <i>In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:</i>				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

## Environmental Evaluation

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the State's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project;

and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. The Land Evaluation and Site Assessment Model (LESA) Model is provided in Appendix A.

Would the project:

- a) **Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?**

**Less than significant impact.** Approximately 6.36 acres of the project site is mapped as “Farmland of Statewide Importance” by the Farmland Mapping and Monitoring Program. As such, FirstCarbon Solutions (FCS) prepared a LESA Model to evaluate the significance of the proposed conversion of Important Farmland to non-agricultural use. The LESA Model scoring is provided in Table 2.

**Table 2: Land Evaluation and Site Assessment Model Scoring Summary**

Category	Factor	Points	Factor Wight	Weighted Points	Remarks
Land Evaluation	Land Capability Class	60	0.25	15	The project site contains Class 3s soils, which are fair in terms of agricultural value.
	Storie Index	49	0.25	12.25	The Storie Index reflects the “fair” agricultural value of the soils.
	Subtotal	–	0.50	27.25	–
Site Assessment	Project Site	0	0.15	12.75	The project size rating is 0 because of the small portion of the project site that contains the Important Farmland.
	Water Resources Availability	85	0.15	12.75	Groundwater and irrigation district water are presumed to be available. During drought years, there are physical restrictions for both water sources.
	Surrounding Agricultural Lands	0	0.15	0	Farmland accounts for approximately 25 percent of the surround land uses. LESA model assigns 0 points when surrounding agricultural uses are less than 40 percent.
	Surrounding Protected Resources Lands	0	0.05	0	There are no protected resource lands surrounding the project site. LESA model assigns 0 points when surrounding resource lands are less than 40 percent.
	Subtotal	–	0.50	12.75	–
<b>Grand Total</b>				<b>40.00</b>	–
Notes: LESA Model workbook provided in Appendix A. The workbook provides a complete explanation of each criterion used in assessing Farmland conversion impacts. Source: FCS 2018.					

As shown in Table 2, the project site achieves a total score of 40.0. The LESA model indicates that scores between 40 and 59 are considered significant if the Land Evaluation and Site Assessment subscores are each greater than or equal to 20 points. Although the Land Evaluation subscore is greater than 20 points, the Site Assessment subscore is less than 20 points. Therefore, the conversion of Important Farmland to non-agricultural use would be less than significant.

**b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?**

**No impact.** The project site is zoned “General Commercial” by the Oakley Zoning Ordinance, a non-agricultural zoning designation. The project would rezone the site to “Planned Development,” which is also a non-agricultural zoning designation. Additionally, the project site is not encumbered by an active Williamson Act contract. Thus, no conflicts with agricultural zoning or Williamson Act contracts would occur. No impact would occur.

**c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?**

**No impact.** The project site is zoned “General Commercial” by the Oakley Zoning Ordinance, a non-forest zoning designation. The project would rezone the site to “Planned Development,” which is also a non-forest zoning designation. Thus, no conflicts with forest zoning would occur. No impact would occur.

**d) Result in the loss of forest land or conversion of forest land to non-forest use?**

**No impact.** Although the project site supports several mature trees, the project site does not meet the State definition of forest land because of the low density of the trees. As such, project implementation would not result in the loss of forest land or conversion of forest land to non-forest use. No impact would occur.

**e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?**

**Less than significant impact.** The project site is one of a number of agricultural properties within the Oakley city limits that are envisioned to support urban land uses in the future. To the extent that the development of the proposed project creates pressures to convert other agricultural properties to urban, this conversion is contemplated by the City of Oakley General Plan. Moreover, the inclusion of these lands within the Oakley city limits indicates that their highest and best use is urban development. Thus, the conversion of these lands to non-agricultural use represents planned growth and not the premature conversion of viable agricultural land. Impacts would be less than significant.

## Mitigation Measures

None.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
<b>3. Air Quality</b> <i>Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations.</i> <i>Would the project:</i>				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or State ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

## Environmental Evaluation

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations.

Would the project:

**a) Conflict with or obstruct implementation of the applicable air quality plan?**

**Less than significant impact with mitigation incorporated.** The project is located in the San Francisco Bay Area Air Basin (Air Basin), where air quality is regulated by the Bay Area Air Quality Management District (BAAQMD). The United States Environmental Protection Agency (EPA) is responsible for identifying non-attainment and attainment areas for each criteria pollutant within the Air Basin. The Air Basin is designated non-attainment for State standards for 1-hour and 8-hour ozone, 24-hour respirable particulate matter (PM<sub>10</sub>), annual PM<sub>10</sub>, and annual fine particulate matter (PM<sub>2.5</sub>) (BAAQMD 2017).

To address regional air quality standards, the BAAQMD has adopted several air quality policies and plans, the most recent of which is the 2017 Clean Air Plan. The 2017 Clean Air Plan was adopted in April of 2017 and serves as the regional air quality plan (AQP) for the Air Basin for attaining federal ambient air quality standards. The primary goals of the 2017 are to protect public health and protect

the climate. The 2017 Clean Air Plan acknowledges that the BAAQMD's two stated goals of protection are closely related. As such, the 2017 Clean Air Plan identifies a wide range of control measures intended to decrease both criteria pollutants<sup>2</sup> and greenhouse gases (GHGs).<sup>3</sup> In September 2010, BAAQMD adopted their final Bay Area 2010 Clean Air Plan, which became the most recent ozone plan for the Air Basin. The 2010 Clean Air Plan identifies how the Air Basin would achieve compliance with the State 1-hour air quality standard for ozone, and how the region will reduce ozone from transporting to other basins downwind of the Air Basin. The 2017 Clean Air Plan updates the BAAQMD's 2010 Clean Air Plan, pursuant to air quality planning requirements defined in the California Health and Safety Code.

The 2017 Clean Air Plan also accounts for projections of population growth provided by Association of Bay Area Governments and vehicle miles traveled provided by the Metropolitan Transportation Commission, and identifies strategies to bring regional emissions into compliance with federal and State air quality standards. A project would be judged to conflict with or obstruct implementation of the 2017 Clean Air Plan if it would result in substantial new regional emissions not foreseen in the air quality planning process.

The BAAQMD does not provide a numerical threshold of significance for project-level consistency analysis with AQPs. Therefore, the following criteria will be used for determining a project's consistency with the AQP.

- **Criterion 1:** Does the project support the primary goals of the AQP?
- **Criterion 2:** Does the project include applicable control measures from the AQP?
- **Criterion 3:** Does the project disrupt or hinder implementation of any AQP control measures?

### Criterion 1

The primary goals of the 2017 Clean Air Plan, the current AQP to date, are to:

- Attain air quality standards;
- Reduce population exposure to unhealthy air and protecting public health in the Bay Area; and
- Reduce GHG emissions and protect the climate.

A measure for determining if the project supports the primary goals of the AQP is if the project would not result in an increase in the frequency or severity of existing air quality violations, cause or contribute to new violations, or delay timely attainment of air quality standards or the interim emission reductions specified in the air quality plans. The development of the AQP is based in part on the land use general plan determinations of the various cities and counties that constitute the Air Basin. A project that is consistent with the general plan is considered to be accounted for in the AQP. In this case, the site is designated "Commercial" by the City of Oakley General Plan and zoned "C

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<sup>2</sup> EPA has established national ambient air quality standards (NAAQS) for six of the most common air pollutants—carbon monoxide, lead, ground-level ozone, particulate matter, nitrogen dioxide, and sulfur dioxide—known as "criteria" air pollutants (or simply "criteria pollutants").

<sup>3</sup> A greenhouse gas is any gaseous compound in the atmosphere that is capable of absorbing infrared radiation, thereby trapping and holding heat in the atmosphere. By increasing the heat in the atmosphere, greenhouse gases are responsible for the greenhouse effect, which ultimately leads to global warming.



(Commercial)” by the Oakley Zoning Ordinance. Therefore, emissions related to development of the project site would have been included in growth forecasts for the current AQP as commercial development. The project includes a General Plan Amendment that proposes to change the project site designation from Commercial to Single Family Residential-Low. The project proposes to rezone the project site from General Commercial to Planned Development.

As shown in Table 3 below, re-designation of the site would not result in an increased number of vehicle miles traveled (VMT). Table 3 shows the estimated annual VMT for the 21.3-acre project site under two scenarios: (1) developed as a regional shopping center, consistent with the current General Plan designation; and (2) developed as 154 single-family dwelling units, in accordance with the proposed project. As shown in Table 3, the project would reduce annual VMT compared to the regional shopping center scenario. This reduction is attributable to the lower daily trip generation associated with the proposed project. The project is estimated to have an average weekday trip generation rate of 7.32 daily trips per dwelling unit (1,454 average weekday trips), while a regional shopping center is estimated to have an average weekday trip generation rate of 37.75 daily trips per 1,000 square feet (19,264 average weekday trips).

**Table 3: VMT Comparison**

Scenario	Average Weekday Trips (trips per day)	Total Annual VMT (vehicle miles traveled per year)
Project site developed as a regional shopping center, consistent with the current General Plan designation <sup>1</sup>	19,264	30,459,864
Project site developed in accordance with the proposed project	1,454	3,088,568
<p>Notes: VMT = vehicle miles traveled <sup>1</sup> To estimate VMT, it was assumed that the project site could be developed with a shopping center totaling 510,305 square feet based on the average of the allowable FAR range for the Commercial designation. Source of existing general plan land use designation VMT: CalEEMod output based on trip generation rates for a shopping center land use from the <i>Institute of Transportation Engineers Trip Generation Manual, 10<sup>th</sup> Edition</i>. Source of project VMT: CalEEMod output based on trip generation rates from consistent with The Village at Main Traffic Impact Analysis prepared for the project by TJKM (2018). See Appendix A for complete CalEEMod outputs.</p>		

Because the project would not increase the VMT generated by the project site compared to the assumptions used in the AQP, it is reasonable to conclude that the project would not adversely affect the AQP. Furthermore, as discussed in Impact 3b, the project’s long-term construction and operational-related emissions would not exceed BAAQMD regional thresholds of significance on an average daily or annual basis. Because VMT generated by the project site has been reasonably accounted for in the AQP and because the project would not exceed BAAQMD regional thresholds of significance on an average daily or annual basis, the project would be consistent with the first criterion.

## Criterion 2

The 2017 Clean Air Plan contains 85 control measures aimed at reducing air pollutants and GHGs at the local, regional, and global levels. Along with the traditional stationary, area, mobile source, and transportation control measures, the 2017 Clean Air Plan contains a number of control measures designed to protect the climate and promote mixed use, compact development to reduce vehicle emissions and exposure to pollutants from stationary and mobile sources. The 2017 Clean Air Plan also includes an account of the implementation status of control measures identified in the 2010 Clean Air Plan.

Table 4 lists the relevant Clean Air Plan policies to the project and evaluates the project's consistency with the policies. As shown below, the project would be consistent with applicable measures and would not hinder the implementation of any AQP control measures.

**Table 4: Project Consistency with Applicable Clean Air Plan Control Measures**

Control Measure	Project Consistency
<b>Stationary Control Measures</b>	
<b>SS29:</b> Asphaltic Concrete	<b>Consistent.</b> Paving activities associated with the proposed project would be required to utilize asphalt that does not exceed BAAQMD emission standards.
<b>SS36:</b> Particulate Matter from Trackout	<b>Consistent with Mitigation.</b> Mud and dirt that may be tracked out onto the nearby public roads during construction activities shall be removed promptly by the contractor based on BAAQMD's requirements. Mitigation Measure (MM) AIR-1, identified under Impact 3b, would implement Best Management Practices (BMPs) recommended by BAAQMD for fugitive dust emissions during construction.
<b>SS37:</b> Particulate Matter from Asphalt Operations	<b>Consistent.</b> Paving and roofing activities associated with the proposed project would be required to utilize best management practices to minimize the particulate matter created from the transport and application of road and roofing asphalt.
<b>SS38:</b> Fugitive Dust	<b>Consistent with Mitigation.</b> Material stockpiling and track out during grading activities, as well as smoke and fumes from paving and roofing asphalt operations, shall utilize BMPs to minimize the creation of fugitive dust.
<b>Transportation Control Measures</b>	
<b>TR9:</b> Bicycle and Pedestrian Access Facilities	<b>Consistent.</b> The proposed project would comply with TR9 by providing pedestrian connectivity within the project site and from the project site to surrounding land uses.

**Table 4 (cont.): Project Consistency with Applicable Clean Air Plan Control Measures**

Control Measure	Project Consistency
<b>Buildings Control Measures</b>	
<b>BL1:</b> Green Buildings	<b>Consistent.</b> The project would not conflict with implementation of this measure. The project will comply with the latest energy efficiency standards and incorporate applicable energy efficiency features designed to reduce project energy consumption.
<b>BL2:</b> Decarbonize Buildings	<b>Consistent.</b> The project would not conflict with implementation of this measure. The project will comply with the latest energy efficiency standards and incorporate applicable energy efficiency features designed to reduce project energy consumption.
<b>BL4:</b> Urban Heat Island Mitigation	<b>Consistent.</b> The project would incorporate landscaping throughout the site. The project would provide landscaping in accordance with City standards that would serve to reduce the urban heat island effect and would include the planting of shade trees.
<b>Energy Control Measures</b>	
<b>EN2:</b> Decrease Energy Use	<b>Consistent.</b> The project applicant would be required to conform to the energy efficiency requirements of the California Building Standards Code, also known as Title 24, which was adopted in order to meet an Executive order in the Green Building Initiative to improve the energy efficiency of buildings through aggressive standards. Specifically, new development must implement the requirements of the most recent Building Energy Efficiency Standards, which is the current version of Title 24. The 2016 Building Efficiency Standards are the current regulations and went into effect on January 1, 2017. If building permits are obtained after January 1, 2020, the project would be required to comply with 2019 Title 24 Energy Efficiency Standards.
<b>Natural and Working Lands Control Measures</b>	
<b>NW2:</b> Urban Tree Planting	<b>Consistent.</b> The project would incorporate landscaping throughout the site. The project would provide landscaping in accordance with City standards that would serve to reduce the urban heat island effect and would include the planting of shade trees.
<b>Waste Management Control Measures</b>	
<b>WA3:</b> Green Waste Diversion	<b>Consistent:</b> The waste service provider for the project will be required to meet the Assembly Bill 341 (AB 341) and Senate Bill 939 (SB 939) and SB 1374 requirements that require waste service providers to divert green waste.

**Table 4 (cont.): Project Consistency with Applicable Clean Air Plan Control Measures**

Control Measure	Project Consistency
<b>WA4:</b> Recycling and Waste Reduction	<b>Consistent:</b> The waste service provider for the project will be required to meet the AB 341 and SB 939 and SB 1374 requirements that require waste to be recycled.
Source: BAAQMD 2017.	

In summary, the project would not conflict with any applicable measures under the 2017 Clean Air Plan after the implementation of Mitigation Measure (MM) AIR-1; therefore, the project would be consistent with Criterion 2 after incorporation of mitigation.

### Criterion 3

The project will not preclude extension of a transit line or bike path, propose excessive parking beyond parking requirements, or otherwise create an impediment or disruption to implementation of any AQP control measures. As shown in Table 4 above, the project would incorporate several AQP control measures as project design features. The project is therefore consistent with Criterion 3.

### Summary

As addressed above, the project would be consistent with all three criteria after the incorporation of MM AIR-1. Thus, the project would not conflict with the 2017 Clean Air Plan. Therefore, impacts associated with conflicting with or obstructing implementation of the 2017 Clean Air Plan would be less than significant with mitigation.

#### **b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?**

**Less than significant impact with mitigation incorporated.** This impact relates to localized and regional criteria pollutant impacts from project construction and operation. Potential impacts would result in exceedances of State or federal standards for oxides of nitrogen (NO<sub>x</sub>), particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>), or carbon monoxide (CO). NO<sub>x</sub> emissions are of concern because of potential health impacts from exposure to NO<sub>x</sub> emissions during both construction and operation and as a precursor in the formation of airborne ozone. PM<sub>10</sub> and PM<sub>2.5</sub> are of concern during construction because of the potential to emit exhaust emissions from the operation of off-road construction equipment and fugitive dust during earth-disturbing activities (construction fugitive dust). CO emissions are of concern during project operation because CO hotspots can be related to increases in on-road vehicle congestion.

Reactive Organic Gas (ROG) emissions are also important because of their participation in the formation of airborne ozone. Ozone is a respiratory irritant and an oxidant that increases susceptibility to respiratory infections and that can cause substantial damage to vegetation and other materials. Elevated ozone concentrations result in reduced lung function, particularly during vigorous physical

activity. This health problem is particularly acute in sensitive receptors such as the sick, elderly, and young children. Construction and operational emissions are discussed separately below.

### **Construction Emissions**

During construction, fugitive dust (PM<sub>10</sub> and PM<sub>2.5</sub>) would be generated from site grading and other earth-moving activities. The majority of this fugitive dust would remain localized and would be deposited near the project site. However, the potential for impacts from fugitive dust exists unless control measures are implemented to reduce the emissions from this source. Exhaust emissions would also be generated from the operation of the off-road construction equipment, as shown in Table 5.

#### **Construction Fugitive Dust**

BAAQMD does not recommend a numerical threshold for fugitive dust particulate matter emissions. Instead, BAAQMD bases the determination of significance for fugitive dust on a consideration of the control measures to be implemented. If all appropriate emissions control measures are implemented for a project as recommended by BAAQMD, then fugitive dust emissions during construction are not considered significant.

As required by MM AIR-1, the project would implement BMPs recommended by BAAQMD for fugitive dust emissions during construction. Therefore, with mitigation, short-term construction impacts associated with violating an air quality standard or contributing substantially to an existing or projected air quality violation would be less than significant.

#### **Construction Air Pollutant Emissions: ROG, NO<sub>x</sub>, PM<sub>10</sub>, PM<sub>2.5</sub>**

Version 2016.3.2 of the California Emissions Estimator Model (CalEEMod) was used to estimate the project's construction emissions. CalEEMod provides a consistent platform for estimating construction and operational emissions from a wide variety of land use projects and is the model recommended by the BAAQMD for estimating project emissions. Estimated construction emissions are compared with the applicable thresholds of significance established by the BAAQMD to assess ROG, NO<sub>x</sub>, exhaust PM<sub>10</sub>, and exhaust PM<sub>2.5</sub> construction emissions to determine significance for this criterion.

For the purpose of this analysis, construction of the project was assumed to begin in July 2019 and last for 1 year. Construction emissions would likely decrease because of improvements in technology and more stringent regulatory requirements if the construction schedule moves to later years. Project-specific construction equipment assumptions are not currently known, therefore, CalEEMod default construction equipment assumptions were used in the analysis. CalEEMod default construction equipment and equipment activity is based on detailed construction industry studies. The assumptions used to estimate emissions and complete CalEEMod results are provided in Appendix A. The duration of construction activity and associated equipment represent a reasonable approximation of the expected construction fleet as required by CEQA guidelines. The applicable BAAQMD thresholds for ROG, NO<sub>x</sub>, exhaust PM<sub>10</sub>, and exhaust PM<sub>2.5</sub> are based on the average daily rate; therefore, the relevant annual emissions were converted to the average daily rate to compare to the applicable thresholds. Annual construction emissions are summarized by source in Table 5, while average daily construction emissions are compared with the applicable BAAQMD significance thresholds in Table 6.

**Table 5: Annual Construction Emissions (Unmitigated)**

Construction Activity	Tons per Year			
	ROG	NO <sub>x</sub>	PM <sub>10</sub> (Exhaust)	PM <sub>2.5</sub> (Exhaust)
<b>2019</b>				
Site Preparation	0.02	0.23	0.01	0.01
Grading	0.08	0.96	0.04	0.04
Paving	0.03	0.16	0.01	0.01
Building Construction—2019	0.12	1.08	0.05	0.04
<i>Total 2019 Construction Emissions</i>	<i>0.25</i>	<i>2.42</i>	<i>0.11</i>	<i>0.10</i>
<b>2020</b>				
Building Construction—2020	0.21	1.89	0.08	0.07
Architectural Coating	2.41	0.02	0.00	0.00
<i>Total 2020 Construction Emissions</i>	<i>2.62</i>	<i>1.91</i>	<i>0.08</i>	<i>0.07</i>
<b>Total Construction Emissions</b>	<b>2.87</b>	<b>4.33</b>	<b>0.19</b>	<b>0.17</b>
Notes: ROG = reactive organic gases      NO <sub>x</sub> = oxides of nitrogen PM <sub>10</sub> = particulate matter 10 microns in diameter PM <sub>2.5</sub> = particulate matter 2.5 microns in diameter Unrounded numbers from the CalEEMod output were used for all calculations. Source: CalEEMod Output (see Appendix A).				

**Table 6: Construction Emissions (Unmitigated Average Daily Rate)**

Parameter	Air Pollutants			
	ROG	NO <sub>x</sub>	PM <sub>10</sub> (Exhaust)	PM <sub>2.5</sub> (Exhaust)
Total Emissions (tons)	2.87	4.33	0.19	0.17
Total Emissions (lbs)	5,750	8,663	372	347
Average Daily Emissions (lbs/day) <sup>1</sup>	21.95	33.06	1.42	1.33
<b>Significance Threshold (lbs/day)</b>	<b>54</b>	<b>54</b>	<b>82</b>	<b>54</b>
Exceeds Significance Threshold?	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>
Notes: <sup>1</sup> Calculated by dividing the total lbs by the total 262 working days of construction for the duration of construction (2019–2020). Calculations use unrounded totals. lbs = pounds      ROG = reactive organic gases      NO <sub>x</sub> = oxides of nitrogen PM <sub>10</sub> = particulate matter 10 microns in diameter PM <sub>2.5</sub> = particulate matter 2.5 microns in diameter Source: CalEEMod Output (see Appendix A).				

As shown in Table 6, the construction emissions from all construction activities are below the recommended thresholds of significance; therefore, the construction of the project would have less than significant impact in regards to emissions ROG, NO<sub>x</sub>, exhaust PM<sub>10</sub>, and exhaust PM<sub>2.5</sub>. As previously discussed, the project would implement MM AIR-1 with BMPs recommended by the BAAQMD to reduce potential impacts related to fugitive dust emissions from use of the construction equipment. Therefore, project construction would have a less than significant impact after incorporation of mitigation.

## Operational Emissions

### **Operational Air Pollutant Emissions: ROG, NO<sub>x</sub>, PM<sub>10</sub>, PM<sub>2.5</sub>**

Regional pollutants of concern include ROG, NO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub>. The project operational emissions for the respective pollutants were calculated using CalEEMod version 2016.3.2. Operations were analyzed assuming full-buildout in 2020. Operational emissions for land use development projects are typically distinguished as mobile-, area-, and energy-source emissions. Mobile-source emissions are those associated with automobiles that would travel to and from the proposed project site. Area-source emissions are those associated with natural gas combustion for space and water heating, landscape maintenance activities, and periodic architectural coatings. Energy-source emissions are those associated with electricity consumption and are more pertinent for GHG emissions than air quality pollutants. The maximum daily operational emissions modeled for summer and winter seasons. The results for the estimated annual emissions during long-term operations are presented in Table 7, while unmitigated maximum daily emissions from project operations are presented in Table 8. For detailed assumptions and complete emission estimates, please refer to Appendix A.

**Table 7: Annual Operational Emissions (Unmitigated)**

Emissions Source	Tons per Year			
	ROG	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Area	1.60	0.02	0.01	0.01
Energy	0.02	0.21	0.02	0.02
Mobile	0.41	1.81	1.17	0.32
Estimated Annual Emissions	2.03	2.03	1.19	0.35
<b>Thresholds of Significance</b>	<b>10</b>	<b>10</b>	<b>15</b>	<b>10</b>
Exceeds Significance Threshold?	No	No	No	No
Notes: ROG = reactive organic gases      NO <sub>x</sub> = oxides of nitrogen PM <sub>10</sub> = particulate matter 10 microns or less in diameter PM <sub>2.5</sub> = particulate matter 2.5 microns or less in diameter Source: CalEEMod Output (see Appendix A).				

**Table 8: Daily Operational Emissions (Unmitigated)**

Emissions Source	Pounds per Day			
	ROG	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Area	9.03	0.89	0.13	0.13
Energy	0.13	1.13	0.09	0.09
Mobile	2.73	10.37	6.79	1.87
Estimated Maximum Daily Emissions	<b>11.89</b>	<b>12.40</b>	<b>7.01</b>	<b>2.09</b>
Thresholds of Significance	<b>54</b>	<b>54</b>	<b>82</b>	<b>54</b>
Exceeds Significance Threshold?	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>
Notes: ROG = reactive organic gases      NO <sub>x</sub> = nitrous oxides PM <sub>10</sub> = particulate matter 10 microns or less in diameter PM <sub>2.5</sub> = particulate matter 2.5 microns or less in diameter Source: CalEEMod Output (see Appendix A).				

As shown in Table 7 and Table 8, the project would not result in operational-related air pollutants or precursors that would exceed BAAQMD's thresholds of significance, indicating that ongoing project operations would not be considered to have the potential to generate a significant quantity of air pollutants. Therefore, long-term operational impacts associated with criteria pollutant emissions would be less than significant.

### **Operational CO Hotspot**

The CO emissions from traffic generated by the project are a concern at the local level. Congested intersections can result in high, localized concentrations of CO.

The BAAQMD recommends a screening analysis to determine if a project has the potential to contribute to a CO hotspot. The screening criteria identify when site-specific CO dispersion modeling is necessary. The project would result in a less than significant impact to air quality for local CO if the following screening criteria are met:

- The project is consistent with an applicable congestion management program established by the county congestion management agency for designated roads or highways, regional transportation plan, and local congestion management agency plans; or
- The project traffic would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour; or
- The project traffic would not increase traffic volumes at affected intersections to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage, bridge underpass, natural or urban street canyon, below-grade roadway).



As indicated in Section 16, Transportation/Traffic, the project would not conflict with the applicable congestion management plan with incorporation of MM TRANS-1 and MM TRANS-2. No intersections impacted by the project would experience traffic volumes of 44,000 vehicles per hour. According to the traffic impact analysis prepared for the project by TJKM (2018), the intersection of Bridgehead Road and Main Street would experience the highest peak-hour traffic volumes among the intersections impacted by the project, with 4,926 vehicles per hour during the PM peak-hour for the Background Plus Project Scenario (Appendix F). Furthermore, the adjacent roadways are not located in an area where vertical or horizontal atmospheric mixing is substantially limited. Therefore, based on the above criteria, the project would not exceed the CO screening criteria and would have a less than significant impact related to CO.

- c) **Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or State ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors)?**

**Less than significant impact with mitigation incorporated.** As shown in Table 6, Table 7, and Table 8, the project's construction and operational emissions are below BAAQMD's project-level thresholds of significance. The thresholds of significance represent the allowable amount of emissions each project can generate without generating a cumulatively considerable contribution to regional air quality impacts. As discussed in Impact 3a, the region is non-attainment for the federal and State ozone standards, the State PM<sub>10</sub> standards, and the federal and State PM<sub>2.5</sub> standards. Therefore, a project that would not exceed the BAAQMD thresholds of significance on the project level also would not be considered to result in a cumulatively considerable contribution to these regional air quality impacts.

## Construction

Emissions from construction-related activities are generally short-term in duration but may still cause adverse air quality impacts. The project would generate emissions from construction equipment exhaust, worker travel, and fugitive dust. These construction emissions include criteria air pollutants from the operation of heavy construction equipment. As provided in the discussion under Impact 3b, the project's construction emissions would not exceed any significance threshold adopted for this project after application of mitigation. Therefore, the project would have a less than significant cumulative impact during construction after incorporation of MM AIR-1.

## Operations

Operational pollutants of concern include ROG, NO<sub>x</sub>, CO, and particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>). As provided in the discussion under Impact 3b, the project's operational emissions would not exceed any significance threshold adopted for this project. Therefore, project operations would have a less than significant cumulative impact.

- d) **Expose sensitive receptors to substantial pollutant concentrations?**

**Less than significant impact.** A sensitive receptor is defined by the BAAQMD as the following:  
"Facilities or land uses that include members of the population that are particularly sensitive to the

effects of air pollutants, such as children, the elderly, and people with illnesses. Examples include schools, hospitals, and residential areas.” Existing sensitive residential receptors are located to the west, south and northeast of the project site.

The following four criteria were applied to determine the significance of project emissions to sensitive receptors:

- **Criterion 1:** Construction of the project would not result in an exceedance of the health risk significance thresholds.
- **Criterion 2:** Operation of the project would not result in an exceedance of the health risk significance thresholds.
- **Criterion 3:** The cumulative health impact would not result in an exceedance of the cumulative health risk significance thresholds.
- **Criterion 4:** Construction of the project would not result in an exceedance of asbestos exposure.

### Criterion 1: Project Construction Toxic Air Pollutants

An assessment was made of the potential health impacts to surrounding sensitive receptors resulting from the emissions of Toxic Air Contaminants (TACs) during construction. A summary of the assessment is provided below, while the detailed assessment is provided in Appendix A of this IS/MND.

Diesel particulate matter (DPM) has been identified by the California Air Resources Board (ARB) as a carcinogenic substance. Major sources of DPM include off-road construction equipment and heavy-duty delivery truck and worker activities. For purposes of this analysis, DPM is represented as exhaust emissions of PM<sub>2.5</sub>.

#### Estimation of Construction DPM Emissions

Construction DPM emissions (as PM<sub>2.5</sub> exhaust) were estimated using CalEEMod version 2016.3.2, as described under the discussion for Impact 3b. Construction was assumed to occur in a single phase and last for approximately 1 year. The construction DPM emissions were assumed to be distributed over the project area with a working schedule of 8 hours per day and 5 days per week.

Construction exhaust emissions of DPM are shown in Table 9.

**Table 9: Project DPM Construction Emissions—No Mitigation**

Year	On-site DPM (gram/m <sup>2</sup> -sec)	Off-site DPM (grams/sec)
<b>Annual Construction Emissions (Without Mitigation)</b>		
2019	2.683E-07	6.208E-04
2020	1.938E-07	1.136E-04
Source: CalEEMod Output and FCS (see Appendix A)		

### Estimation of Cancer Risks

The BAAQMD has developed a set of guidelines for estimating cancer risks that provide adjustment factors that emphasize the increased sensitivities and susceptibility of young children to exposures to TACs (BAAQMD, 2016). These adjustment factors include age-sensitivity weighting factors, age-specific daily breathing rates, and age-specific time-at-home factors. The recommended method for the estimation of cancer risk is shown in the equations below with the cancer risk adjustment factors provided in Table 10 for several types of sensitive/residential receptors (infant, child, and adult).

$$\text{Cancer Risk} = C_{\text{DPM}} \times \text{Inhalation Exposure Factor} \quad (\text{EQ-1})$$

Where:

Cancer Risk = Total individual excess cancer risk defined as the cancer risk a hypothetical individual faces if exposed to carcinogenic emissions from a particular source for specified exposure durations; this risk is defined as an excess risk because it is above and beyond the background cancer risk to the population; cancer risk is expressed in terms of risk per million exposed individuals.

$C_{\text{DPM}}$  = Period average DPM air concentration calculated from the air dispersion model in micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ )

Inhalation is the most important exposure pathway to impact human health from DPM and the inhalation exposure factor is defined as follows:

$$\text{Inhalation Exposure Factor} = \text{CPF} \times \text{EF} \times \text{ED} \times \text{DBR} \times \text{AAF/AT} \quad (\text{EQ-2})$$

Where:

CPF = Inhalation cancer potency factor for the TAC: 1.1 (mg/kg-day)<sup>-1</sup> for DPM

EF = Exposure frequency (days/year)

ED = Exposure duration (years of construction)

AAF = set of age-specific adjustment factors that include age sensitivity factors (ASF), daily breathing rates (DBR), and time at home factors (TAH)—see Table 10.

AT = Averaging time period over which exposure is averaged (days)

The California Office of Environmental Health Hazards Assessment (OEHHA)-recommended values for the various cancer risk parameters, shown in EQ 2, above, are provided in Table 10.

**Table 10: Exposure Assumptions for Cancer Risk**

Receptor Type	Exposure Frequency		Exposure Duration (years)	Age Sensitivity Factors (ASF)	Time at Home Factor (TAH) (%)	Daily Breathing Rate (DBR) <sup>1</sup> (L/kg-day)
	Hours/day	Days/year				
Sensitive/Residential—Infant						
3 <sup>rd</sup> Trimester	24	350	0.25	10	85	361
0 to 2 year	24	350	1	10	85	1,090

**Table 10 (cont.): Exposure Assumptions for Cancer Risk**

Receptor Type	Exposure Frequency		Exposure Duration (years)	Age Sensitivity Factors (ASF)	Time at Home Factor (TAH) (%)	Daily Breathing Rate (DBR) <sup>1</sup> (L/kg-day)
	Hours/day	Days/year				
Sensitive Receptor—Child						
3 to 16 years	24	350	1	3	72	572
Sensitive Receptor—Adult						
> 16 years	24	350	1	1	73	261
Notes: <sup>1</sup> The daily breathing rates recommended by the BAAQMD for sensitive/residential receptors assume the 95 <sup>th</sup> percentile breathing rates for all individuals less than 2 years of age and 80 <sup>th</sup> percentile breathing rates for all older individuals. (L/kg-day) = liters per kilogram body weight per day Source: BAAQMD 2016. Air Toxics NSR Program Health Risk Assessment (HRA) Guidelines. Website: <a href="http://www.baaqmd.gov/~media/files/planning-and-research/rules-and-regs/workshops/2016/reg-2-5/hra-guidelines_clean_jan_2016-pdf.pdf?la=en">http://www.baaqmd.gov/~media/files/planning-and-research/rules-and-regs/workshops/2016/reg-2-5/hra-guidelines_clean_jan_2016-pdf.pdf?la=en</a> .						

### **Estimation of Non-Cancer Chronic Hazards**

An evaluation of the potential non-cancer effects of chronic chemical exposures was also conducted. Adverse health effects are evaluated by comparing the annual receptor concentration of each chemical compound with the appropriate reference exposure level (REL). Available RELs promulgated by the OEHHA were considered in the assessment.

Risk characterization for non-cancer health hazards from TACs is expressed as a hazard index (HI). The HI is a ratio of the predicted concentration of the project's emissions to a concentration considered acceptable to public health professionals, termed the REL.

To quantify non-carcinogenic impacts, the hazard index approach was used.

$$HI = C_{ann}/REL \quad (EQ-3)$$

Where:

HI = chronic hazard index

$C_{ann}$  = annual average concentration of TAC as derived from the air dispersion model ( $\mu\text{g}/\text{m}^3$ )

REL = reference exposure level above which a significant impact is assumed to occur ( $\mu\text{g}/\text{m}^3$ )

The HI assumes that chronic sub-threshold exposures adversely affect a specific organ or organ system (toxicological endpoint). For each discrete chemical exposure, target organs presented in regulatory guidance were used. To calculate the hazard index, each chemical concentration or dose is divided by the appropriate toxicity reference exposure level. For compounds affecting the same toxicological endpoint, this ratio is summed. Where the total equals or exceeds 1, a health hazard is presumed to exist. For purposes of this assessment, the TAC of concern is DPM for which the OEHHA

has defined a REL for DPM of  $5 \mu\text{g}/\text{m}^3$ . The principal toxicological endpoint assumed in this assessment was through inhalation.

### **Estimation of Health Risks and Hazards from Project Construction**

The estimated health and hazard impacts at the maximum impacted sensitive receptor (MIR) from the project's construction emissions are provided in Table 11. The MIR was found at the existing multi-family residences located approximately 70 feet southwest of the project site.

**Table 11: Estimated Health Risks and Hazards during Project Construction**

Source	Cancer Risk (risk per million)	Chronic Non-Cancer Hazard Index <sup>(2)</sup>	Annual PM <sub>2.5</sub> Concentration ( $\mu\text{g}/\text{m}^3$ )
Risks and Hazards at the MIR: Infant <sup>1</sup>	7.94	0.01	0.10
Risks and Hazards at the MIR: Child <sup>1</sup>	1.06	0.01	0.10
Risks and Hazards at the MIR: Adult <sup>1</sup>	0.16	0.01	0.10
<b>BAAQMD Thresholds of Significance</b>	<b>10</b>	<b>1</b>	<b>0.30</b>
<b>Exceeds Individual Source Threshold?</b>	<b>No</b>	<b>No</b>	<b>No</b>
Notes: MIR = Maximum Impacted Sensitive Receptor <sup>1</sup> The MIR was found at the existing multi-family residences located approximately 70 feet southwest of the project site. <sup>2</sup> Chronic non-cancer hazard index was estimated by dividing the annual DPM concentration (as PM <sub>2.5</sub> exhaust) by the REL of $5 \mu\text{g}/\text{m}^3$ . Source: Appendix A.			

As shown above in Table 11, the cancer risks, non-cancer hazard index and PM<sub>2.5</sub> impacts at the MIR would not exceed the BAAQMD's recommended thresholds of significance. Therefore, the project's construction emissions would not result in significant health impacts to nearby sensitive receptors.

### **Criterion 2: Project-Specific Operation Toxic Air Pollutants**

The project proposes to develop 154 single-family residential units on the project site and would not have on-site sources of TACs during operation. As described in the project-specific traffic impact analysis (TJKM, 2018), the project is expected to generate an increase of 1,454 daily vehicle trips. The proposed project would primarily generate trips for residents and visitors traveling to and from the project site. The daily travel trips to and from the project site would primarily be generated by passenger vehicles. Because nearly all passenger vehicles are gasoline-combusted, the project would not generate a significant amount of DPM emissions during operation. Therefore, the project would not result in significant health impacts to nearby sensitive receptors during operation.

### **Criterion 3: Cumulative Health Risk Assessment**

The BAAQMD recommends assessing the potential cumulative impacts from sources of TACs within 1,000 feet of a project. As a result, a cumulative health risk assessment was performed that examined the cumulative impacts of the project's construction emissions and sources of TAC emissions within

1,000 feet of the project. Based on proximity to the project site and the results of the construction health risk assessment, the MIR was determined to be located at the existing multi-family residences located approximately 70 feet southwest of the project site. For a project-level analysis, BAAQMD provides three tools for use in screening potential sources of TACs. These tools are:

- **Surface Street Screening Tables.** BAAQMD pre-calculated potential cancer risks and PM<sub>2.5</sub> concentration increases for each county within their jurisdiction for roadways that meet BAAQMD's "major roadway" criteria of 10,000 vehicles or 1,000 trucks per day. Risks are assessed by roadway volume, roadway direction, and distance to sensitive receptors. Main Street bounds the project site to the north and is estimated to support approximately 30,000 vehicle trips per day.
- **Freeway Screening Analysis Tool.** BAAQMD prepared a Google Earth file that contains pre-estimated cancer risk, hazard index, and PM<sub>2.5</sub> concentration increases for highways within the Bay Area. Risks are provided by roadway link and are estimated based on direction and distance to the sensitive receptor. There are no major freeways located within 1,000 feet of the project site.
- **Stationary Source Risk and Hazard Screening Tool.** BAAQMD prepared a Google Earth file that contains the locations of all stationary sources within the Bay Area that have BAAQMD permits. For each emissions source, BAAQMD provides conservative estimates of cancer risk, non-cancer hazards, and PM<sub>2.5</sub> concentrations. Applying this screening tool indicated the presence of one stationary source located within the 1,000 feet radius from the project site.

The cumulative health risk results are summarized in Table 12 during project construction at the MIR.

**Table 12: Summary of the Cumulative Health Impacts at the MIR during Construction**

Source	Source Type	Distance from MIR <sup>1</sup> (feet)	Cancer Risk (per million)	Chronic HI	PM <sub>2.5</sub> Concentration (µg/m <sup>3</sup> )
<b>Project</b>					
Construction	Diesel Construction Equipment	70	7.94	0.01	0.10
<b>Existing Stationary Sources (BAAQMD Facility Number)<sup>2</sup></b>					
7504	NA	1,670	0.00	0.000	0.004
<b>Major Roadways</b>					
Main Street	Local Roads	800	1.14	0.961	0.029
<b>Cumulative Health Risks</b>					
<b>Cumulative Total with Project Construction</b>			<b>9.08</b>	<b>0.97</b>	<b>0.13</b>
<b>BAAQMD's Cumulative Thresholds of Significance</b>			<b>100</b>	<b>10</b>	<b>0.8</b>
<b>Threshold Exceedance?</b>			<b>No</b>	<b>No</b>	<b>No</b>

**Table 12 (cont.): Summary of the Cumulative Health Impacts at the MIR during Construction**

Source	Source Type	Distance from MIR <sup>1</sup> (feet)	Cancer Risk (per million)	Chronic HI	PM <sub>2.5</sub> Concentration (µg/m <sup>3</sup> )
<p>Notes:  MIR = Maximum Impacted Sensitive Receptor  NA = no data available  <sup>1</sup> The MIR was found at the existing multi-family residences located approximately 70 feet southwest of the project site.  <sup>2</sup> Assumes emissions remain constant with time.  Source: Appendix A.</p>					

As noted in Table 12, the cumulative impacts from the project construction and existing sources of TACs would be less than the BAAQMD's cumulative thresholds of significance at the MIR. Thus, the cumulative health risk impacts from project construction would be less than significant.

#### **Criterion 4: Naturally Occurring Asbestos**

Construction in areas of rock formations that contain naturally occurring asbestos could release asbestos in to the air and pose a health hazard. A review of the map containing areas more likely to have rock formations containing naturally occurring asbestos in California indicates that there are no areas likely containing naturally occurring asbestos within one mile of the project site (USGS, 2011). Therefore, it can be reasonably concluded that the project would not expose sensitive receptors to naturally occurring asbestos during project construction. Impacts would be less than significant.

#### **e) Create objectionable odors affecting a substantial number of people?**

**Less than significant impact.** As stated in the BAAQMD 2017 CEQA Air Quality Guidelines, odors are generally regarded as an annoyance rather than a health hazard and the ability to detect odors varies considerably among the populations and overall is subjective.

The BAAQMD does not have a recommended odor threshold for construction activities. However, BAAQMD recommends screening criteria that are based on distance between types of sources known to generate odor and the receptor. For projects within the screening distances, the BAAQMD has the following threshold for project operations:

An odor source with five (5) or more confirmed complaints per year averaged over three years is considered to have a significant impact on receptors within the screening distance shown in Table 3-3 [of the BAAQMD's guidance].

Two circumstances have the potential to cause odor impacts:

- 1) A source of odors is proposed to be located near existing or planned sensitive receptors, or
- 2) A sensitive receptor land use is proposed near an existing or planned source of odor.

Projects that would site an odor source or a receptor farther than the applicable screening distance, shown in Table 13 below, would not likely result in a significant odor impact.

**Table 13: Odor Screening Distances**

Land Use/Type of Operation	Project Screening Distance
Wastewater Treatment Plant	2 miles
Wastewater Pumping Facilities	1 mile
Sanitary Landfill	2 miles
Transfer Station	1 mile
Composting Facility	1 mile
Petroleum Refinery	2 miles
Asphalt Batch Plant	2 miles
Chemical Manufacturing	2 miles
Fiberglass Manufacturing	1 mile
Painting/Coating Operations	1 mile
Rendering Plant	2 miles
Coffee Roaster	1 mile
Food Processing Facility	1 mile
Confined Animal Facility/Feed Lot/Dairy	1 mile
Green Waste and Recycling Operations	1 mile
Source: BAAQMD 2017.	

## Project Construction

Odors from diesel exhaust, architectural coatings, and asphalt paving, which are objectionable to some, would be emitted during construction of the project; however, emissions would be temporary and would disperse rapidly from the project site. Therefore, construction of the proposed project would not create objectionable odors affecting a substantial number of people. As such, impacts would be less than significant.

## Project Operation

### ***Operational-related Odors***

The proposed project would develop 154 single-family residences, a park, a bioretention basin, open space, and an internal roadway network. None of the proposed uses are typical major odor-generating land uses. Land uses typically associated with odors include wastewater treatment facilities, waste-disposal facilities, agricultural operations, and other sources shown above in Table 13. Minor sources of odors, such as exhaust from mobile sources, are not typically associated with numerous odor complaints, but are known to have temporary and less concentrated odors. During long-term operation of the project, odors would primarily consist of passenger vehicles traveling to



and from the site. These occurrences would not produce objectionable odors affecting a substantial number of people; therefore, operational impacts associated with the project's potential to create odors would be less than significant.

### ***The Project as a Sensitive Receptor***

As a residential project, the project has the potential to place sensitive receptors near existing odor sources. The project site is located within the project screening distances for several potential source of odor, as defined in Table 13. Public record requests were filed with the BAAQMD to obtain the most recent 3-year odor compliant history for the potential odor generators within the vicinity of the project site; the information obtained from the public record requests is summarized in Table 14.

**Table 14: Summary of Odor Compliant Records**

Name of Facility	Location	Land Use/Type of Operation	Number of Complaints Over Most Recent 3-year Period <sup>2</sup>	Average Number of Complaints per Year	Distance From the Project Site
Ironhouse Sanitary District	450 Walnut Meadows Drive, Oakley, CA 94561	Wastewater Treatment Plant	1	<1	1.7 miles southeast of the project site
Oakley Collision Center	5289 Neroly Road, Oakley, CA 94561	Painting/Coating Operations	0	0	0.7 mile west of the project site
Oakley Disposal Services	85 Carol Lane, Oakley, CA 94561	Green Waste and Recycling Operations	0	0	0.8 mile southeast of the project site
G E Sales & Rentals	1371 Main Street, Oakley, CA 94561	Green Waste and Recycling Operations	0	0	0.2 mile west of the project site
Delta Scrap and Salvage	1371 Main Street, Oakley, CA 94561	Green Waste and Recycling Operations	0	0	0.2 mile west of the project site
Severed Metal Fabrication and Powder Coating	1315 Main Street, Oakley, CA 94561	Metal Smelting Plants	0	0	0.3 mile west of the project site
A-1 Metal Fabrication	3275 East 18 <sup>th</sup> Street, Antioch, CA 94509	Metal Smelting Plants	0	0	0.2 mile west of the project site
Notes: <sup>1</sup> December 2015-December 2018					

Based on the responses from the BAAQMD Public Records Section, none of the potential sources of odor creates odors affecting a substantial number of people. The Ironhouse Sanitary District received one odor compliant during the most recent 3-year period, while the other facilities within the project distances had not received any complaints during the same period. In summary, there was less than one compliant per year based on the odor complaints filed for facilities within the

screening distances of the project site average over the most recent 3-year period. This does not exceed the applicable threshold of five confirmed complaints averaged over a 3-year period. Furthermore, there are existing residential uses located between the project site and the Ironhouse Sanitary District. For all facilities outlined in Table 14, there are existing residential uses located closer to each facility than the proposed project. Considering all of the information, the uses in the vicinity of the project would not cause substantial odor impacts to the project.

## Mitigation Measures

- MM AIR-1** During construction activities, the following air pollution control measures shall be implemented:
- Exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
  - All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
  - All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
  - All roadways, driveways, and sidewalks shall be paved as soon as possible.
  - Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.
  - All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified visible emissions evaluator.
  - A publicly visible sign shall be posted with the telephone number and person to contact at the City regarding dust complaints. This person shall respond and take corrective action within 48 hours of a complaint or issue notification. The BAAQMD's phone number shall also be visible to ensure compliance with applicable regulations.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
<b>4. Biological Resources</b> <i>Would the project:</i>				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The section provided below evaluates potential effects on biological resources that may result from project implementation. The analysis is based on a site visit by an FCS biologist. In addition, descriptions and analysis in this section are based on results from the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDDB) and the United States Fish and Wildlife Service (USFWS) database searches. Supporting information is provided in Appendix C.

## Environmental Evaluation

Would the project:

- a) **Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?**

**Less than significant impact with mitigation incorporated.** For the purpose of this analysis, special-status species refers to all species formally listed as threatened and/or endangered under the United States Endangered Species Act (ESA) or the California Endangered Species Act (CESA); California Species of Special Concern; designated as Fully Protected by CDFW; given a status of 1A, 1B, or 2 by California Native Plant Society (CNPS); or designated as special-status by city, county, or other regional planning documents. Federal and state listed threatened and/or endangered species are legally protected under ESA/CESA. The designated special-status species listed by CNPS have no direct legal protection, but require an analysis of the significance of potential impacts under CEQA guidelines.

Special-status plant and wildlife species typically occur in undeveloped areas. Although it is less likely, it is also possible for them to occur within developed areas. The project site contains characteristics of land that has been developed or disturbed, including disturbed soils, impervious surfaces, and buildings present on site. 12 special-status plant species and 12 special-status wildlife species were evaluated for their potential to occur on the project site, based on their ecology and regional occurrences within USGS Jersey Island, California 7.5 minute quadrangle. Potential impacts occurring to special-status species, if they were found on-site, would likely be significant.

### Special-Status Plant Species

Twelve special status plant species have been recorded with the potential to occur within the project site based on CNDDDB and CNPS database searches, but due to the high level of grading and disturbance experienced at the project site, none are expected to occur on site and no mitigation measures are recommended. A plant's potential to occur on the project site was based on the presence of suitable habitats, soil types, and occurrences recorded by the USFWS, CNPS, or CNDDDB within the Jersey Island quadrangle, and field observations made during the October 23, 2018, site survey by FCS Biologist Brian Mayerle. Based on the high level of disturbance and lack of suitable soil types within project boundaries, it was determined that all 12 special-status plant species are considered unlikely to occur on the project site. Many of the listed plants require marshes and swamps, riparian areas, or coastal salt marshes, all of which are absent at the site.

### Special-Status Wildlife Species

As noted above, 12 special-status wildlife species were evaluated for their potential to occur on project site. Because of the highly disturbed nature of the project site and previous development efforts coupled with an overall lack of suitable habitat, few special-status wildlife species have the potential to occur within the project boundaries. Since the burrowing owl (*Athene cunicularia*) does prefer dry, open habitats dominated by annual or perennial grasslands, it is recommended to

conduct additional surveys before construction to ensure no impacts to the species occur and to comply with the regulations set forth in the East Contra Costa County Habitat Conservation Plan. The project site and its adjacent areas contain mature trees that support potential habitat for bird species protected under the Migratory Bird Treaty Act. Swainson's hawk (*Buteo swainsoni*) also has the potential to nest and forage within the project boundaries.

Construction activities could disturb nesting and breeding birds in trees within and around the construction site. Potential impacts on special-status and migratory birds that could result from the construction and operation of the project include the destruction of eggs or occupied nests, mortality of young, and the abandonment of nests with eggs or young birds prior to fledging. If these species were found to be present, impacts to these species would be significant.

MM BIO-1 would ensure the absence of burrowing owls before the start of project development. MM BIO-2 would reduce impacts to Swainson's hawk to a less than significant level. MM BIO-3 covers the potential for nesting birds and raptors as well as birds protected under the Migratory Bird Treaty Act (MBTA).

**b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?**

**No impact.** The project site consists mainly of highly disturbed land with invasive vegetative species. There are no critical or sensitive habitats found within the project site. No further studies or regulatory permitting would be required, as no impacts to any sensitive natural communities would occur from project implementation. No impact would occur.

**c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?**

**No impact.** The project site does not contain any wetlands or other areas designated as waters of the United States and no further studies or regulatory permitting would be required. Therefore, the project would not have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act. No impact would occur.

**d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of wildlife nursery sites?**

**No impact.** The project site was evaluated for evidence of a wildlife movement corridor during the reconnaissance-level survey. No wildlife movement corridors are within the project boundaries. The project site is surrounded by a highly traffic road, corporate offices, commercial buildings, and a public storage facility. As such, the project would not have a significant impact on wildlife corridors or nursery sites and no mitigation is necessary. No impact would occur.

**e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?**

**Less than significant impact with mitigation incorporated.** As previously mentioned, there are mature adult oak trees throughout the project site. As the project proposes to remove several mature trees within the project boundaries, the project will be required to adhere to all policies regarding tree removal and replacement. Any project developments that requires the removal of adult trees will have abide by City of Oakley Municipal Code Chapter 9.1.1112, “Heritage and Protected Trees,” which establishes regulations for the protection and preservation of native and non-native trees in the City of Oakley.

A tree inventory and assessment was completed by International Society of Arboriculture (ISA)-Certified Arborist Scott Yarger of WRA Environmental Consultants on July 16, 2018. The report is included in its entirety in Appendix C. The Arborist report found the project site contains 38 trees that are considered heritage trees per the City of Oakley Tree Ordinance, and 15 non-heritage trees. A total of 29 heritage coast live oak trees and 15 non-heritage trees will be removed. Implementation of MM BIO-4 will ensure no significant impacts occur due to tree removal.

**f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?**

**Less than significant impact with mitigation incorporated.** The proposed project is within the boundaries of the East Contra Costa County Habitat Conservation Plan (HCP)/Natural Community Conservation Plan (NCCP). The project site is located within Zone 1 and would be assessed a fee of \$12,457/acre at the time building permits are sought.

East Contra Costa County HCP/NCCP covered species that are applicable to the project site include:

- Western burrowing owl survey and direct take avoidance measures (refer to MM BIO-1)
- Swainson’s hawk nest survey and direct take avoidance measures (refer to MM BIO-2)

With the implementation of mitigation, impacts would be reduced to a level of less than significant.

## Mitigation Measures

**MM BIO-1** Prior to any ground disturbance related to activities covered under the East Contra Costa County HCP/NCCP, a USFWS/CDFW-approved biologist shall conduct a preconstruction survey on the project site. The survey shall establish the presence or absence of western burrowing owl and/or habitat features, and evaluate use by owls in accordance with CDFW survey guidelines.

On the parcel where the activity is proposed, the biologist shall survey the proposed disturbance footprint and a 500-foot radius from the perimeter of the proposed footprint to identify burrows and owls. Adjacent parcels under different land ownership need not be surveyed. The survey shall take place near the sunrise or sunset in accordance with CDFW guidelines. All burrows or burrowing owls shall be

identified and mapped. The survey shall take place no more than 30 days prior to any construction activity. During the breeding season (February 1–August 31), surveys shall document whether burrowing owls are nesting on or directly adjacent to disturbance areas. During the non-breeding season (September 1–January 31), surveys shall document whether burrowing owls are using habitat on or directly adjacent to any disturbance area. Survey results will be valid only for the season during which the survey is conducted. The survey results shall be submitted to CDFW and the City of Oakley Community Development Department.

If burrowing owls are not discovered, further mitigation is not required. If burrowing owls are observed during the pre-construction surveys, the applicant shall perform the following measures to limit the impact on the burrowing owls:

- Avoidance shall include establishment of a 160-foot non-disturbance buffer zone. Construction may occur during the breeding season if a qualified biologist monitors the nest and determines that the birds have not begun egg laying and incubation, or that the juveniles from the occupied burrows have fledged. During the non-breeding season (September 1–January 31), the project proponent shall avoid the owls and the burrows they are using, if possible. Avoidance shall include the establishment of a 160-foot non-disturbance buffer zone.

If it is not possible to avoid occupied burrows, passive relocation shall be implemented. Owls shall be excluded from burrows in the immediate impact zone and within a 160-foot buffer zone by installing one-way doors in burrow entrances. These doors shall be in place for 48 hours prior to excavation. The project area shall be monitored daily for 1 week to confirm that the owl has abandoned the burrow. Whenever possible, burrows should be excavated using hand tools and refilled to prevent re-occupation. Plastic tubing or a similar structure shall be inserted in the tunnels during excavation to maintain an escape route for any owls inside the burrow.

#### **MM BIO-2**

Prior to any ground disturbance related to covered activities that occurs during the nesting season (March 15–September 15), a qualified biologist will conduct a preconstruction survey no more than 1 month prior to construction to establish whether Swainson's hawk nests within 1,000 feet of the project site are occupied. If potentially occupied nests within 1,000 feet are off the project site, then their occupancy will be determined by observation from public roads or by observations of Swainson's hawk activity (e.g., foraging) near the project site. If nests are occupied, minimization measures and construction monitoring are required (see below).

During the nesting season (March 15–September 15), covered activities within 1,000 feet of occupied nests or nests under construction will be prohibited to prevent nest abandonment. If site-specific conditions or the nature of the covered activity (e.g., steep topography, dense vegetation, limited activities) indicate that a smaller buffer could be used, the Implementing Entity will coordinate with CDFW/USFWS to determine the appropriate buffer size.

If young fledge prior to September 15, covered activities can proceed normally. If the active nest site is shielded from view and noise from the project site by other development, topography, or other features, the project applicant can apply to the Implementing Entity for a waiver of this avoidance measure. Any waiver must also be approved by USFWS and CDFW. While the nest is occupied, activities outside the buffer can take place.

All active nest trees will be preserved on site, if feasible. Nest trees, including non-native trees, lost to covered activities will be mitigated by the project proponent according to the requirements below.

The loss of non-riparian Swainson's hawk nest trees will be mitigated by the project proponent by:

If feasible on-site, planting 15 saplings for every tree lost with the objective of having at least 5 mature trees established for every tree lost according to the requirements listed below.

- 1) Pay the Implementing Entity an additional fee to purchase, plant, maintain, and monitor 15 saplings on the HCP/NCCP Preserve System for every tree lost according to the requirements listed below, OR
- 2) The project proponent will plant, maintain, and monitor 15 saplings for every tree lost at a site to be approved by the Implementing Entity (e.g., within an HCP/NCCP Preserve or existing open space linked to HCP/NCCP preserves), according to the requirements listed below.

The following requirements will be met for all planting options:

- Tree survival shall be monitored at least annually for 5 years, then every other year until year 12. All trees lost during the first 5 years will be replaced. Success will be reached at the end of 12 years if at least 5 trees per tree lost survive without supplemental irrigation or protection from herbivory. Trees must also survive for at least 3 years without irrigation.
- Irrigation and fencing to protect from deer and other herbivores may be needed for the first several years to ensure maximum tree survival.
- Native trees suitable for this site should be planted. When site conditions permit, a variety of native trees will be planted for each tree lost to provide trees with different growth rates, maturation, and life span, and to provide a variety of tree canopy structures for Swainson's hawk. This variety will help to ensure that nest trees will be available in the short term (5-10 years for cottonwoods and willows) and in the long term (e.g., valley oak, sycamore). This will also minimize the temporal loss of nest trees.
- Riparian woodland restoration conducted as a result of covered activities (i.e., loss of riparian woodland) can be used to offset the nest tree planting requirement above, if the nest trees are riparian species.



- Whenever feasible and when site conditions permit, trees should be planted in clumps together or with existing trees to provide larger areas of suitable nesting habitat and to create a natural buffer between nest trees and adjacent development (if plantings occur on the development site).
- Whenever feasible, plantings on the site should occur closest to suitable foraging habitat outside the Urban Development Area (UDA).
- Trees planted in the HCP/NCCP preserves or other approved off-site location will occur within the known range of Swainson's hawk in the inventory area and as close as possible to high-quality foraging habitat.

**MM BIO-3**

Implementation of the following avoidance and minimization measures would avoid or minimize potential effects to migratory birds and habitat in and adjacent to the project site. These measures shall be implemented for construction work during the nesting season (February 15 through August 31):

- If construction or tree removal is proposed during the breeding/nesting season for migratory birds (typically February 15 through August 31), a qualified biologist shall conduct pre-construction surveys for northern harrier, grasshopper sparrow, pallid bat, Townsend's big-ear bat, and other migratory birds within the construction area, including a 300-foot survey buffer, no more than 3 days prior to the start of ground disturbing activities in the construction area.
- If an active nest is located during pre-construction surveys, USFWS and/or CDFW (as appropriate) shall be notified regarding the status of the nest. Furthermore, construction activities shall be restricted as necessary to avoid disturbance of the nest until it is abandoned or a qualified biologist deems disturbance potential to be minimal. Restrictions may include establishment of exclusion zones (no ingress of personnel or equipment at a minimum radius of 300 feet around an active raptor nest and 50-foot radius around an active migratory bird nest) or alteration of the construction schedule.
- A qualified biologist shall delineate the buffer using nest buffer signs, environmentally sensitive area fencing, pin flags, and or flagging tape. The buffer zone shall be maintained around the active nest site(s) until the young have fledged and are foraging independently

**MM BIO-4**

In order to avoid and minimize damage to existing trees that are not proposed for direct impact by project activities, the following measures shall be implemented during construction:

- All construction activity (grading, filling, paving, landscaping etc.) shall respect the root protection zone (RPZ) around all trees within the vicinity of the project area that are to be preserved. The RPZ should be a distance of 1.0 times the dripline radius measured from the trunk of the tree. Exception to this standard could be considered on a case-by-case basis, if it is demonstrated that an encroachment

into the RPZ will not affect the root system or the health of the tree, and is authorized by an ISA-Certified Arborist or comparable specialist.

- Temporary protective fencing shall be installed around the dripline of existing trees prior to commencement of any construction activity conducted within 25 feet of the tree canopy. The fence shall be clearly marked to prevent inadvertent encroachment by heavy machinery.
- Drainage will not be allowed to pond around the base of any tree.
- An ISA-Certified Arborist or tree specialist shall be retained to perform any necessary pruning of trees during construction activity.
- Should any utility lines encroach within the tree protection zone, a single, shared utility conduit shall be used where possible to avoid negative impact to trees.
- Roots exposed, as a result of construction activities shall be covered with wet burlap to avoid desiccation, and should be buried as soon as practicable.
- Construction materials or heavy equipment shall not be stored within the root protection zone of preserved trees.
- Only an ISA-Certified Arborist or comparable specialist will make specific recommendations as to where any existing trees can safely tolerate some level of fill within the drip line.
- Trenching within RPZ shall be done under the field supervision of an ISA-Certified Arborist and shall be hand dug as much as possible in addition to using auger or drill.
- Construction materials shall be properly stored away from existing trees to avoid spillage or damage to trees.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
<b>5. Cultural and Tribal Cultural Resources</b>				
<i>Would the project:</i>				
a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:</i>				
e) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

This section describes the existing cultural resources setting and potential effects from project implementation on the project site and its surrounding area. Descriptions and analysis in this section are based on information provided by the California Native American Heritage Commission (NAHC), Northwest Information Center (NWIC), National Register of Historic Places (NRHR), California Register of Historic Resources (CRHR), California Historical Landmarks list, California Points of Historical Interest list, California State Historic Resources Inventory, the University of California Museum of Paleontology Paleontological Database, and a pedestrian survey of the site conducted by FCS on November 2, 2018. The records search map, NAHC correspondence, historic and paleontological reports and pedestrian survey photographs are provided in Appendix D

## Environmental Evaluation

### Cultural Resources

Would the project:

- a) **Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?**

**Less than significant impact with mitigation incorporated.** The results of the NWIC records search show that six historic resources have been recorded within 0.5 mile of the project site, and the resources are not located within the site itself. Review of historical aerial photographs and topographic maps dating as early as 1940 show no evidence of any buildings or structures at the site. Furthermore, the intensive survey of the site conducted by FCS on November 2, 2018, did not identify any buildings, structures, or other historic resources within the project area itself. For these reasons, the potential for the proposed project to have an adverse effect on historic resources is considered low.

While unlikely, subsurface construction activities always have the potential to damage or destroy previously undiscovered historic resources. Historic resources can include wood, stone, foundations, and other structural remains; debris-filled wells or privies; and deposits of wood, glass, ceramics, and other refuse. Accordingly, implementation of MM CUL-1 will be required to reduce potential impacts to historic resources that may be discovered during project construction. With the incorporation of mitigation, impacts associated with historic resources would be less than significant.

- b) **Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?**

**Less than significant impact with mitigation incorporated.** Records search results from the NWIC indicate that six historic resources have been recorded within 0.5 mile of the project site. Of these resources, one contains both historic and prehistoric archaeological resources. An intensive pedestrian survey of the project site conducted by FCS on November 2, 2018, also failed to identify additional archaeological resources within the project site. The project site is therefore considered to have low sensitivity for undiscovered archaeological resources.

While the records search and survey data indicate the likelihood of encountering archaeological resources during project construction is low, there is always a possibility that subsurface excavation may encounter previously undiscovered prehistoric archaeological resources. Such resources could consist of but are not limited to stone, bone, wood, or shell artifacts or features, including hearths and structural elements. Accordingly, this is a potentially significant impact. Implementation of MM CUL-1 would ensure that this potential impact is reduced to a less-than-significant level.

- c) **Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?**

**Less than significant impact with mitigation incorporated.** The entire project site is underlain by Holocene-Pleistocene dune sand deposits (Qds). Holocene alluvium is too young to be considered

fossiliferous, therefore, the potential for the proposed project to have an adverse effect on paleontological resources is considered low.

Although not anticipated, sub-surface construction activities associated with the proposed project, such as grading and trenching, could result in a significant impact to paleontological resources in the unlikely event late Pleistocene alluvium is encountered below the Holocene alluvium. Paleontological resources may include, but are not limited to, fossils from mammoths, saber-toothed cats, rodents, reptiles, fish, and birds. Accordingly, implementation of MM CUL-2 will be required to reduce potential impacts to paleontological resources that may be discovered during project construction. With the incorporation of mitigation, impacts associated with paleontological resources would be less than significant.

**d) Disturb any human remains, including those interred outside of formal cemeteries?**

**Less than significant impact with mitigation incorporated.** No human remains or cemeteries are known to exist within or near the project area. However, there is always the possibility that subsurface construction activities associated with the proposed project, such as trenching and grading, could potentially damage or destroy previously undiscovered human remains. Accordingly, this is a potentially significant impact. In the event of the accidental discovery or recognition of any human remains, CEQA Guidelines Section 15064.5; Health and Safety Code Section 7050.5; Public Resources Code Section 5097.94 and Section 5097.98 must be followed. In the unlikely event human remains are discovered, implementation of MM CUL-3 would reduce this potential impact to a less than significant level.

**Tribal Cultural Resources**

Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

**e) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or**

**Less than significant impact.** A review of the California Register of Historical Resources, local registers of historic resources, a records search conducted at the NWIC, an NAHC sacred lands file failed to identify any listed Tribal Cultural Resources (TCRs) that may be adversely affected by the proposed project. As such, no known eligible or potentially eligible TCRs will adversely affected by the proposed project.

- f) **A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.**

**Less than significant impact.** On November 27, 2018, a response was received from the NAHC indicating that no sacred sites were listed as present in the project area. On November 15, 2018, letters including a map and project details were sent to seven Tribal Representatives identified by the NAHC as potentially having interest or information about the project area. To date, no responses have been received, and the lead agency has not identified additional significant TCRs meeting the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. As such, no known significant TCRs will be adversely affected by the proposed project.

## Mitigation Measures

**MM CUL-1** In the event a potentially significant cultural resource is encountered during subsurface earthwork activities, all construction activities within a 100-foot radius of the find shall cease and workers should avoid altering the materials until an archaeologist who meets the Secretary of Interior's Professional Qualification Standards for archaeology has evaluated the situation. The applicant shall include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. Potentially significant cultural resources consist of but are not limited to stone, bone, glass, ceramics, fossils, wood, or shell artifacts, or features including hearths, structural remains, or historic dumpsites. The archaeologist shall make recommendations concerning appropriate measures that will be implemented to protect the resource, including but not limited to excavation and evaluation of the finds in accordance with Section 15064.5 of the CEQA Guidelines. Any previously undiscovered resources found during construction within the project Site shall be recorded on appropriate Department of Parks and Recreation (DPR) 523 forms and will be submitted to the City of Oakley, the Northwest Information Center, and the State Historic Preservation Office, as required.

**MM CUL-2** In the event that fossils or fossil-bearing deposits are discovered during construction activities, excavations within a 100-foot radius of the find shall be temporarily halted or diverted. The project contractor shall notify a qualified paleontologist to examine the discovery. The applicant shall include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. The paleontologist shall document the discovery as needed in accordance with Society of Vertebrate Paleontology standards and assess the significance of the find under the criteria set forth in CEQA Guidelines Section 15064.5. The paleontologist shall notify the appropriate agencies to determine procedures that would be followed before construction activities are allowed to resume at the location of the find. If the applicant determines that avoidance is not feasible, the paleontologist shall prepare

an excavation plan for mitigating the effect of construction activities on the discovery. The plan shall be submitted to the City of Oakley for review and approval prior to implementation, and the applicant shall adhere to the recommendations in the plan.

**MM CUL-3** In the event of the accidental discovery or recognition of any human remains, CEQA Guidelines Section 15064.5; Health and Safety Code Section 7050.5; Public Resources Code Section 5097.94, and Section 5097.98 must be followed. If during the course of project development there is accidental discovery or recognition of any human remains, the following steps shall be taken:

1. There shall be no further excavation or disturbance within 100 feet of the remains until the Contra Costa County Coroner is contacted to determine if the remains are Native American and if an investigation of the cause of death is required. If the coroner determines the remains to be Native American, the coroner shall contact the NAHC within 24 hours, and the NAHC shall identify the person or persons it believes to be the most likely descendant of the deceased Native American. The most likely descendant may make recommendations to the landowner or the person responsible for the excavation work within 48 hours, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98.
2. Where the following conditions occur, the landowner or his or her authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity either in accordance with the recommendations of the most likely descendant or on the project site in a location not subject to further subsurface disturbance:
  - The NAHC is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 48 hours after being notified by the commission.
  - The descendant identified fails to make a recommendation.
  - The landowner or his authorized representative rejects the recommendation of the descendant, and mediation by the NAHC fails to provide measures acceptable to the landowner.

Additionally, California Public Resources Code Section 15064.5 requires the following relative to Native American Remains:

- When an initial study identifies the existence of, or the probable likelihood of, Native American Remains within a project, a lead agency shall work with the appropriate Native Americans as identified by the Native American Heritage Commission as provided in Public Resources Code Section 5097.98. The applicant may develop a plan for treating or disposing of, with appropriate dignity, the human remains and any items associated with Native American Burials with the appropriate Native Americans as identified by the Native American Heritage Commission.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
<b>6. Geology and Soils</b> <i>Would the project:</i>				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>



## Environmental Evaluation

Would the project:

- a) **Expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving:**
  - i) **Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.**

**No impact.** According to the California Department of Conservation, the project site is not located within an Alquist-Priolo Earthquake Fault Zone and no surface evidence of faulting has been observed. This condition precludes the possibility of the proposed project being exposed to fault rupture. No impact would occur.

- ii) **Strong seismic ground shaking?**

**Less than significant impact.** Moderate to severe earthquakes can cause strong ground shaking, which is the case for most locations within the San Francisco Bay Area. The proposed project's structures would be designed in accordance with all applicable provisions of the California Building Standards Code that pertain to seismic design. Therefore, impacts associated with strong seismic ground shaking would be less than significant.

- iii) **Seismic-related ground failure, including liquefaction?**

**Less than significant impact.** Soil liquefaction results from loss of strength during cyclic loading, such as imposed by earthquakes. Soils most susceptible to liquefaction are clean, loose, saturated, uniformly graded, fine-grained sands. According to Figure 8-2 of the City of Oakley General Plan, most of the City of Oakley, including the project site, is located within an area designated as having a "Generally High" liquefaction potential. However, the proposed project would be compliant Liquefaction Policies with the City of Oakley General Plan, which would reduce the potential for serious injuries, and minimize the risk of property losses from the effects of ground failure and liquefaction. The impacts would be less than significant.

- iv) **Landslides?**

**No impact.** The project site contains flat relief and is not near any significant slopes. For these reasons, no impact would occur.

- b) **Result in substantial soil erosion or the loss of topsoil?**

**Less than significant impact.** Construction of the project would require earthwork activities that could potentially allow surface runoff to convey on-site sediments and pollutants off-site, thereby potentially affecting local downstream waterways by degrading water quality. Since the project would disturb one or more acres of land, the project would be required to obtain coverage under the General Permit for

Discharges of Storm Water Associated with Construction Activity. Construction activities subject to the General Permit includes clearing, grading, and disturbances to the ground such as stockpiling or excavation. The General Permit requires implementation of a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP would contain a site map(s) showing the construction perimeter, existing and proposed buildings, stormwater collection and discharge points, general pre- and post-construction topography, drainage patterns across the site, and adjacent roadways.

The SWPPP must also include project construction features (i.e., BMPs) designed to prevent erosion and protect the quality of stormwater runoff. Construction BMPs may include but are not limited to stabilized construction entrances, straw wattles on embankments, and sediment filters on existing inlets. Additionally, the SWPPP must contain a visual monitoring program and a chemical monitoring program for “non-visible” pollutants, should the BMPs fail. Section A of the Construction General Permit lists all elements that must be contained in a SWPPP. The preparation, implementation, and participation with both the National Pollutant Discharge Elimination System (NPDES) General Permit and the Construction General Permit, including the SWPPP and BMPs, would reduce project construction effects on erosion to acceptable levels. Therefore, short-term construction impacts associated with erosion would be less than significant.

- c) **Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?**

**Less than significant impact.** The project site contains flat relief and is not near any significant slopes. According to Figure 8-2 of the City of Oakley General Plan, most of the City of Oakley, including the project site, is located within an area designated as having a “Generally High” liquefaction potential. However, the proposed project would be compliant Liquefaction Policies with the City of Oakley General Plan. This would reduce the potential for serious injuries, and minimize the risk of property losses from the effects from unstable soil. The impacts would be less than significant.

- d) **Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?**

**Less than significant impact.** The United States Department of Agriculture—Natural Resources Conservation Service indicates that the project site is underlain by Delhi sand with 2 to 9 percent slopes (DaC), which possess expansive properties. Expansive soils change in volume with changes in moisture. These soils can shrink or swell and cause heaving and cracking of slabs-on-grade, pavements, and structures founded on shallow foundations. The proposed project’s structures would be designed in accordance with all applicable provisions of the California Building Standards Code that pertain to seismic design. Furthermore, compliance with General Plan policies related to geology and seismic hazards would ensure that impacts associated with expansive soils would be less than significant.

- e) **Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?**

**No impact.** The proposed project's residences would connect with the municipal sewer system and would not require septic tanks or similar alternative wastewater disposal system. Therefore, no impacts associated with septic tanks or similar alternative wastewater systems would occur.

### Mitigation Measures

None.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
<b>7. Greenhouse Gas Emissions</b> <i>Would the project:</i>				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## Environmental Evaluation

Where available, the significance criteria established by the applicable air quality management or air pollution control district (in this case, the BAAQMD) may be relied upon to make the following determinations. Supporting information, including detailed GHG emission estimates, is provided in Appendix B.

Would the project:

- a) **Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?**

**Less than significant impact with mitigation incorporated.** Both construction period and operational period activities have the potential to generate GHG emissions. The project would generate GHG emissions during temporary (short-term) construction activities such as site grading, construction equipment engines, on-site heavy-duty construction vehicles, vehicles hauling materials to and from the project site, asphalt paving, and motor vehicles used by the construction workers. On-site construction activities would vary depending on the level of construction activity.

Long-term, operational GHG emissions would result from project generated vehicular traffic, on-site combustion of natural gas, operation of any landscaping equipment, off-site generation of electrical power over the life of the project, the energy required to convey water to and wastewater from the project site, the emissions associated with the hauling and disposal of solid waste from the project site, and any fugitive refrigerants from air conditioning or refrigerators.

The 2017 BAAQMD Thresholds contain the following for GHGs:

For land use development projects (including residential, commercial, industrial, and public land uses and facilities), the threshold is compliance with a qualified GHG Reduction Strategy; or annual emissions less than 1,100 metric tons per year of carbon dioxide equivalent (CO<sub>2</sub>e); or 4.6 metric tons CO<sub>2</sub>e/service population/year (residents + employees).

The estimated annual operational emissions and annualized construction emissions were combined and compared with the BAAQMD's threshold of 4.6 metric tons (MT) CO<sub>2</sub>e/service population/year to determine significance for this criterion.

In a November 30, 2015 ruling, the California Supreme Court in *Center for Biological Diversity v. California Department of Fish and Wildlife* Case No. S217763 ("Newhall Ranch Case") concluded that whether the project was consistent with meeting statewide emission reduction goals is a legally permissible criterion of significance, but the significance finding for the project was not supported by a reasoned explanation based on substantial evidence. The 2017 BAAQMD CEQA Guidelines provide a GHG emission operational threshold based on a 2020 GHG target. In light of California's Supreme Court decision (Newhall Ranch Case), a threshold that fully accounts for the 2030 target was formulated to assess project emissions in the year 2030. Based on the BAAQMD Proposed Air Quality CEQA Thresholds of Significance 2009, the total 1990 Land Use Sector GHG emissions were 60.3 million metric tons (MMT) CO<sub>2</sub>e. Senate Bill 32 (SB 32) requires California to reduce its Statewide GHG emissions 40 percent below the 1990 levels by 2030. Therefore, the BAAQMD is expected to reduce its land use-related GHG emissions to 36.18 MMT CO<sub>2</sub>e by 2030. The projected total population in the Air Basin in 2030 is 8,545,459, and the projected total employment is 4,236,900. The 2017 BAAQMD CEQA Appendix D illustrates the methodology of GHG efficiency threshold (i.e., service population threshold) based on required 2020 GHG reduction target for the region. Therefore, to be consistent with both the 2020 GHG methodology and the SB 32 GHG reduction target for 2030, the GHG emissions threshold per service population in 2030 would be 2.83 MT CO<sub>2</sub>e per service population.

This estimated 2030 efficiency threshold is a surrogate threshold while BAAQMD, ARB, or other regulatory agencies develop formally adopted threshold to comply with SB 32. It is acknowledged that this estimated surrogate threshold is based the best available on published information at the time of this analysis; a more detailed and up-to-date threshold will likely be developed in the future. Nevertheless, in order to fulfill the mandates of the Newhall Ranch Case decision and to make an effort to address 2030 emission reduction targets, the 2.83 MT CO<sub>2</sub>e/service population/year is used to evaluate project emissions in the year 2030.

## Construction

The project would emit GHG emissions during construction from the off-road equipment, worker vehicles, and any hauling that may occur. BAAQMD does not presently provide a construction-related GHG emission threshold, but recommends that construction-generated GHG emissions be quantified and disclosed. The BAAQMD also recommends that lead agencies (in this case, the City of Oakley) make a determination of the level of significance of construction-generated GHG emissions in relation to meeting Assembly Bill 32 (AB 32) GHG reduction goals. Total GHG emissions generated throughout construction were combined and are presented in Table 15. As shown in Table 15, construction of the project is estimated to generate approximately 745 MT CO<sub>2</sub>e over the entire project construction duration. In order to account for the construction emissions, the total emissions generated during construction were amortized based on the life of the development (residential—30 years) and added to the operational emissions. The amortized emissions from construction were added to the operational emissions to determine the total emissions of the project. These total

project emissions were analyzed against the applicable BAAQMD significance threshold standard of 4.6 MT CO<sub>2</sub>e/service population/year in Table 16.

**Table 15: Construction GHG Emissions**

Construction Activities	On-site MT CO <sub>2</sub> e per year	Off-site MT CO <sub>2</sub> e per year	MT CO <sub>2</sub> e per year
<b>2019</b>			
Site Preparation	17.2	1.0	18
Grading	98.2	2.9	101
Paving	20.6	1.7	22
Building Construction—2019	79.2	126.0	205
<i>Total 2019 Construction Emissions</i>	<i>215.2</i>	<i>131.6</i>	<i>347</i>
<b>2020</b>			
Building Construction—2020	151.5	240.4	392
Architectural Coating	2.6	3.2	6
<i>Total 2020 Construction Emissions</i>	<i>154.1</i>	<i>243.6</i>	<i>398</i>
<b>Total Construction Emissions</b>			<b>745</b>
<b>Amortized over 30 years</b>			<b>25</b>
Notes: MT CO <sub>2</sub> e = metric tons of carbon dioxide equivalent Source: CalEEMod Output (see Appendix B)			

### Operation

Operational or long-term emissions occur over the life of the project. The major sources for operational GHG emissions include:

- Motor Vehicles:** These emissions refer to GHG emissions contained in the exhaust from the cars and trucks that would travel to and from the project site. Trip generation rates used in estimating mobile-source emissions were consistent with those presented in traffic impact analysis prepared for the project by TJKM (2018). The trip generation potential is estimated to result in an average of 1,454 average weekday trips (TJKM 2018). The project would incorporate design features and would obtain benefits from its location and infrastructure that would reduce project vehicle miles traveled compared with default values. For instance, the project site is located less than 0.1 mile the nearest bus stop and would provide sidewalks on both sides of each internal street and along Main Street. Note that CalEEMod nominally treats these design elements and conditions as “mitigation measures,” despite their inclusion in the project description.
- Natural Gas:** These emissions refer to the GHG emissions that occur when natural gas is burned on the project site. Natural gas uses could include heating water, space heating, dryers, stoves, or other uses.

- **Indirect Electricity:** These emissions refer to those generated by off-site power plants to supply electricity required for the project. All electricity at the project site would be supplied by Marin Clean Energy.
- **Water Transport:** These emissions refer to those generated by the electricity required to transport and treat the water to be used on the project site.
- **Waste:** These emissions refer to the GHG emissions produced by decomposing waste generated by the project.

*Project Operations in the Year 2020*

Operational GHG emissions by source are shown in Table 16. Operational emissions at project buildout, in the year 2020, were estimated at 1,790 MT CO<sub>2</sub>e. The analysis includes construction emissions amortized over the life of the project (see Table 15), for a total of 1,815 MT CO<sub>2</sub>e in the year 2020. Based on the City-specific average household size of 3.45 persons per household, the project would support approximately 532 residents at full buildout. As shown in Table 16, the project would generate approximately 3.4 MT CO<sub>2</sub>e per service person at year 2020.

**Table 16: Operational GHG Emissions (2020)**

Emission Source	Project Total MT CO <sub>2</sub> e per year
Area	7
Energy	429
Mobile (Vehicles)	1,280
Waste	73
Water	1
Total Project Operational Emissions	1,790
Annualized Construction Emissions	25
<b>Total Project Emissions</b>	<b>1,815</b>
Unit	Value
<b>Service Population (Employees + Residents)</b>	<b>532</b>
<b>Project Emission Generation (MT CO<sub>2</sub>e/service population/year)</b>	<b>3.4</b>
<b>BAAQMD Threshold (MT CO<sub>2</sub>e/service population/year)</b>	<b>4.6</b>
<b>Does project exceed threshold?</b>	<b>No</b>
Notes: MT CO <sub>2</sub> e = metric tons of carbon dioxide equivalent. Unrounded results used to calculate totals. Source of Emissions: CalEEMod Output (see Appendix B)	

As shown in Table 16, the project has combined long-term operational emissions and amortized construction emissions would not exceed the BAAQMD's threshold of 4.6 MT CO<sub>2</sub>e/service population/year for GHGs. Therefore, the impact would be less than significant.

*Project Operations in the Year 2030*

GHG emissions from project operations in the year 2030 are compared with the surrogate 2030 GHG efficiency threshold, as shown in Table 17. After the inclusion of amortized construction emissions, the project is estimated to generate 1,492 MT CO<sub>2</sub>e in the year 2030. Using a service population of 532 residents, the project would generate approximately 2.80 MT CO<sub>2</sub>e per service person at year 2030.

**Table 17: Operational GHG Emissions (2030)**

Emission Source	Project Total MT CO <sub>2</sub> e per year
Area	7
Energy	429
Mobile (Vehicles)	957
Waste	73
Water	1
Total Project Operational Emissions	1,467
Annualized Construction Emissions	25
<b>Total Project Emissions</b>	<b>1,492</b>
Unit	Value
<b>Service Population (Employees + Residents)</b>	<b>532</b>
<b>Project Emission Generation (MT CO<sub>2</sub>e/service population/year)</b>	<b>2.80</b>
<b>Surrogate BAAQMD SB 32 GHG Efficiency Threshold (MT CO<sub>2</sub>e/service population/year)</b>	<b>2.83</b>
<b>Does project exceed threshold?</b>	<b>No</b>
Notes: MT CO <sub>2</sub> e = metric tons of carbon dioxide equivalent. Unrounded results used to calculate totals. Source of Emissions: CalEEMod Output (see Appendix B)	

As shown above in Table 17, the project has combined long-term operational emissions and amortized construction emissions would not exceed the surrogate 2030 GHG efficiency threshold. The impact would be less than significant.



**b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?**

**Less than significant impact.** The City of Oakley has not adopted a climate action plan or GHG reduction strategy. The City completed community-wide and local government GHG inventories for a 2005 baseline in 2011, and a 2010 update for the inventories was completed in 2013. The inventories could be used for completing a climate action plan in the future, but do not constitute a plan, policy, or regulation. Additionally, the “Oakley Strategic Energy Plan” was completed in 2015. The Strategic Energy Plan outlines actions for the City to take to achieve the City’s Vision for energy efficiency and sustainability, but does not provide policies or regulations that would apply to individual development projects. Since a climate action plan or GHG reduction strategy have not been developed for the City, the project is assessed for its consistency with the ARB adopted Scoping Plan and the ARB 2017 Climate Change Scoping Plan Update.

**AB 32 Scoping Plan**

The California State Legislature adopted AB 32 in 2006. AB 32 focuses on reducing GHG emissions to 1990 levels by the year 2020. Pursuant to the requirements in AB 32, the ARB adopted the Climate Change Scoping Plan (Scoping Plan) in 2008, which outlines actions recommended to obtain that goal. The Scoping Plan calls for an “ambitious but achievable” reduction in California’s GHG emissions, cutting approximately 30 percent from BAU emission levels projected for 2020, or about 10 percent from 2008 levels. The Scoping Plan contains a variety of strategies to reduce the State’s emissions. As shown in Table 18, the project is consistent with most of the strategies, while others are not applicable to the project.

**Table 18: Scoping Plan Measures Consistency Analysis**

Scoping Plan Reduction Measure	Project Consistency
<b>California Cap-and-Trade Program Linked to Western Climate Initiative.</b> Implement a broad-based California Cap-and-Trade program to provide a firm limit on emissions. Link the California Cap-and-Trade Program with other Western Climate Initiative Partner programs to create a regional market system to achieve greater environmental and economic benefits for California. Ensure California’s program meets all applicable AB 32 requirements for market-based mechanisms.	<b>Not applicable.</b> Although the cap-and-trade system has begun, the project is not one targeted by the cap-and-trade system regulations and therefore this measure does not apply to the project.
<b>California Light-Duty Vehicle GHG Standards.</b> Implement adopted standards and planned second phase of the program. Align zero-emission vehicle, alternative and renewable fuel and vehicle technology programs with long-term climate change goals.	<b>Not applicable.</b> This is a Statewide measure that cannot be implemented by a project applicant or lead agency. However, the standards would be applicable to the light-duty vehicles that access the project site.
<b>Energy Efficiency.</b> Maximize energy efficiency building and appliance standards; pursue additional efficiency including new technologies, policy, and implementation mechanisms. Pursue comparable investment in energy efficiency from all retail providers of electricity in California.	<b>Consistent.</b> This is a measure for the State to increase its energy efficiency standards in new buildings. The project is required to build to the new standards and would increase its energy efficiency through compliance.

**Table 18 (cont.): Scoping Plan Measures Consistency Analysis**

Scoping Plan Reduction Measure	Project Consistency
<b>Renewable Portfolio Standard.</b> Achieve 33 percent renewable energy mix Statewide. Renewable energy sources include (but are not limited to) wind, solar, geothermal, small hydroelectric, biomass, anaerobic digestion, and landfill gas.	<b>Not applicable.</b> This is a Statewide measure that cannot be implemented by a project applicant or lead agency. Specifically, electricity would be supplied to the project by Marin Clean Energy, which already meets or exceeds the proposed renewable standards.
<b>Low Carbon Fuel Standard.</b> Develop and adopt the Low Carbon Fuel Standard.	<b>Not applicable.</b> This is a Statewide measure that cannot be implemented by a project applicant or lead agency. All fuel consumption associated with the project's construction and operational activities would use fuel that meets these standards.
<b>Regional Transportation-Related GHG Targets.</b> Develop regional GHG emissions reduction targets for passenger vehicles. This measure refers to SB 375.	<b>Not applicable.</b> The project is not related to developing GHG emission reduction targets.
<b>Vehicle Efficiency Measures.</b> Implement light-duty vehicle efficiency measures.	<b>Not applicable.</b> When this measure is initiated, the standards would be applicable to the light-duty vehicles that would access the project site.
<b>Goods Movement.</b> Implement adopted regulations for the use of shore power for ships at berth. Improve efficiency in goods movement activities.	<b>Not applicable.</b> The project does not propose any changes to maritime, rail, or intermodal facilities or forms of transportation.
<b>Million Solar Roofs Program.</b> Install 3,000 megawatt of solar-electric capacity under California's existing solar programs.	<b>Consistent.</b> This measure is to increase solar throughout California, which is being done by various electricity providers and existing solar programs. The project would not preclude the implementation of this strategy. If building permits are obtained after January 1, 2020, the project would be required to include solar panels on all new single-family homes.
<b>Medium/Heavy-Duty Vehicles.</b> Adopt medium and heavy-duty vehicle efficiency measures.	<b>Not applicable.</b> This is a Statewide measure that cannot be implemented by a project applicant or lead agency.
<b>Industrial Emissions.</b> Require assessment of large industrial sources to determine whether individual sources within a facility can cost-effectively reduce GHG emissions and provide other pollution reduction co-benefits. Reduce GHG emissions from fugitive emissions from oil and gas extraction and gas transmission. Adopt and implement regulations to control fugitive CH <sub>4</sub> emissions and reduce flaring at refineries.	<b>Not applicable.</b> This measure would apply to the direct GHG emissions at major industrial facilities emitting more than 500,000 MT CO <sub>2</sub> e per year. The project is a residential land use development project that would generate less than 2,000 MT CO <sub>2</sub> e per year (see Table 16).
<b>High Speed Rail.</b> Support implementation of a high-speed rail system.	<b>Not applicable.</b> This is a Statewide measure that cannot be implemented by a project applicant or lead agency. The proposed project would not preclude the implementation of this strategy.

**Table 18 (cont.): Scoping Plan Measures Consistency Analysis**

Scoping Plan Reduction Measure	Project Consistency
<b>Green Building Strategy.</b> Expand the use of green building practices to reduce the carbon footprint of California's new and existing inventory of buildings.	<b>Consistent.</b> The project would comply with the California Energy Code and thus incorporate applicable energy efficiency features designed to reduce project energy consumption.
<b>High Global Warming Potential Gases.</b> Adopt measures to reduce high global warming potential gases.	<b>Not applicable.</b> This measure is applicable to the high global warming potential gases that would be used by sources with large equipment (such as in air conditioning and commercial refrigerators). It is not anticipated that a residential development project consisting of 154 single-family dwelling units would include refrigeration subject to refrigerant management regulations adopted by ARB.
<b>Recycling and Waste.</b> Reduce CH <sub>4</sub> emissions at landfills. Increase waste diversion, composting, and commercial recycling. Move toward zero waste.	<b>Not applicable.</b> The project would not conflict with implementation of this measure. The project is required to achieve the recycling mandates via compliance with the CALGreen code. Furthermore, the project would utilize City of Oakley recycling services. Specifically, the project would be served with curbside green waste and recyclable pick-up during operations.
<b>Sustainable Forests.</b> Preserve forest sequestration and encourage the use of forest biomass for sustainable energy generation.	<b>Not applicable.</b> The project site is in a built-up urban area. No forested lands exist on-site; therefore, no on-site preservation is possible.
<b>Water.</b> Continue efficiency programs and use cleaner energy sources to move and treat water.	<b>Consistent.</b> The project would comply with the California Energy Code and the California Updated Model Landscape Ordinance. With adherence to these regulations, the project will consume energy and water in an efficient manner.
<b>Agriculture.</b> In the near-term, encourage investment in manure digesters and at the 5-year Scoping Plan update determine if the program should be made mandatory by 2020.	<b>Not applicable.</b> The project site is not designated or in use for agriculture purposes. No grazing, feedlot, or other agricultural activities that generate manure occur on-site or are proposed to be implemented by the project.
Source of ARB Scoping Plan Reduction Measure: ARB 2008.	

As shown in Table 18 the project is consistent with the applicable strategies and would not conflict with the recommendations of AB 32 in achieving a Statewide reduction in GHG emissions. Considering this information, the project would not significantly hinder or delay the State's ability to meet the reduction targets contained in AB 32 or conflict with implementation of the Scoping Plan.

## SB 32 2017 Scoping Plan Update

The 2017 Climate Change Scoping Plan Update addressing the SB 32 targets was adopted on December 14, 2017. Table 19 provides an analysis of the project's consistency with the 2017 Scoping Plan Update measures. As shown in Table 19, many of the measures are not applicable to the project, while the project is consistent with strategies that are applicable.

**Table 19: Consistency with SB 32 2017 Scoping Plan Update**

2017 Scoping Plan Update Reduction Measure	Project Consistency
<b>SB 350 50 Percent Renewable Mandate.</b> Utilities subject to the legislation will be required to increase their renewable energy mix from 33 percent in 2020 to 50 percent in 2030.	<b>Not applicable.</b> This measure would apply to utilities and not to individual development projects. The project would purchase electricity from a utility subject to the SB 350 Renewable Mandate. Specifically, electricity would be supplied to project by Marin Clean Energy. Marin Clean Energy already meets or exceeds the proposed renewable standards.
<b>SB 350 Double Building Energy Efficiency by 2030.</b> This is equivalent to a 20 percent reduction from 2014 building energy usage compared to current projected 2030 levels.	<b>Not applicable.</b> This measure applies to existing buildings. New structures are required to comply with Title 24 Energy Efficiency Standards that are expected to increase in stringency over time. The project would comply with the applicable Title 24 Energy Efficiency Standards in effect at the time building permits are received. If building permits are obtained after January 1, 2020, the project would be required to include solar panels on all new single-family homes.
<b>Low Carbon Fuel Standard.</b> This measure requires fuel providers to meet an 18 percent reduction in carbon content by 2030.	<b>Not applicable.</b> This is a Statewide measure that cannot be implemented by a project applicant or lead agency. However, vehicles accessing the proposed residential buildings at the project site would benefit from the standards.
<b>Mobile Source Strategy (Cleaner Technology and Fuels Scenario).</b> Vehicle manufacturers will be required to meet existing regulations mandated by the LEV III and Heavy-Duty Vehicle programs. The strategy includes a goal of having 4.2 million zero-emission vehicles (ZEVs) on the road by 2030 and increasing numbers of ZEV trucks and buses.	<b>Not applicable.</b> This measure is not applicable to the project; however, vehicles accessing the future single-family homes at the project site would benefit from the increased availability of cleaner technology and fuels. Future residents and visitors can be expected to purchase increasing numbers of more fuel-efficient and zero emission cars and trucks each year. Furthermore, delivery trucks and buses that would serve future residents will be made by increasing numbers of ZEV delivery trucks.
<b>Sustainable Freight Action Plan.</b> The plan's target is to improve freight system efficiency 25 percent by increasing the value of goods and services produced from the freight sector, relative to the amount of carbon that it produces by 2030. This would be achieved by deploying over 100,000 freight vehicles and equipment capable of zero emission operation and maximize near-zero emission freight vehicles and equipment powered by renewable energy by 2030.	<b>Not applicable.</b> This measure applies to owners and operators of trucks and freight operations. The project is residential in nature and would not support truck and freight operations. It is expected that deliveries throughout the State would be made with an increasing number of ZEV delivery trucks, including deliveries that would be made to future residents.

**Table 19 (cont.): Consistency with SB 32 2017 Scoping Plan Update**

2017 Scoping Plan Update Reduction Measure	Project Consistency
<b>Short-Lived Climate Pollutant (SLCP) Reduction Strategy.</b> The strategy requires the reduction of SLCPs by 40 percent from 2013 levels by 2030 and the reduction of black carbon by 50 percent from 2013 levels by 2030.	<b>Consistent.</b> Consistent with BAAQMD Regulation 6, Rule 3, no wood-burning devices are proposed as part of the project. Natural gas hearths produce very little black carbon compared to wood-burning fireplace; therefore, the project would not include major sources of black carbon.
<b>SB 375 Sustainable Communities Strategies.</b> Requires Regional Transportation Plans to include a Sustainable Communities Strategy (SCS) for reduction of per capita vehicle miles traveled.	<b>Not applicable.</b> The project does not include the development of a Regional Transportation Plan. Furthermore, the project is not within an SCS priority area.
<b>Post-2020 Cap-and-Trade Program.</b> The Post 2020 Cap-and-Trade Program continues the existing program for another 10 years. The Cap-and-Trade Program applies to large industrial sources such as power plants, refineries, and cement manufacturers.	<b>Not applicable.</b> The project is not one targeted by the cap-and-trade system regulations, and, therefore, this measure does not apply to the project. However, the post-2020 Cap-and-Trade Program indirectly affects people and entities who use the products and services produced by the regulated industrial sources when increased cost of products or services (such as electricity and fuel) are transferred to the consumers.
<b>Natural and Working Lands Action Plan.</b> The ARB is working in coordination with several other agencies at the federal, State, and local levels, stakeholders, and with the public, to develop measures as outlined in the Scoping Plan Update and the governor's Executive Order B-30-15 to reduce GHG emissions and to cultivate net carbon sequestration potential for California's natural and working land.	<b>Not applicable.</b> The project is residential development in a built-up urban area and would not be considered natural or working lands.
Source of ARB 2017 Scoping Plan Update Reduction Measures: ARB 2017.	

## Summary

As presented in Table 18, the project is consistent with the applicable strategies and would not conflict with the recommendations of AB 32 in achieving a Statewide reduction in GHG emissions. Considering this information, the proposed plan would not significantly hinder or delay the State's ability to meet the reduction targets contained in AB 32 or conflict with implementation of the Scoping Plan. Furthermore, as shown in Table 19, implementation of the project would not conflict with the reduction measures proposed in SB 32. Considering this information, the proposed project would not conflict with any applicable plan, policy or regulation of an agency adopted to reduce the emissions of GHGs. The impact would be less than significant.

## Mitigation Measures

None.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
<b>8. Hazards and Hazardous Materials</b> <i>Would the project:</i>				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

## Environmental Evaluation

Would the project:

- a) **Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?**

**Less than significant impact.** The project applicant is proposing to develop 154 residential lots on a 20-acre project site with 84,077 square feet of park, open space, and bioretention basin areas. Residential developments typically do not involve the regular use, storage, transport, or disposal of significant amounts of hazardous materials. Project construction and operations would involve the minor routine transport and handling of minimal quantities of hazardous substances such as diesel fuels, lubricants, solvents, asphalt, pesticides, and fertilizers. Handling and transportation of these materials could result in the exposure of workers or residents to hazardous materials. However, the project would not create a significant hazard to the public or the environment, because project construction and operations would comply with applicable federal, State, and local laws pertaining to the safe handling and transport of hazardous materials. Impacts would be less than significant.

- b) **Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?**

**Less than significant impact.** As described in Impact 8(a), the proposed project would involve the minor use of hazardous materials typically required during construction, such as diesel fuel and other motor lubricants. Contractors would comply with applicable federal, State, and local laws pertaining to the safe handling and transport of hazardous materials, which would minimize potential spill occurrences. Spills that may occur during construction activities would likely be minimal and potential adverse effects would be localized. Plans and specifications typically require contractors to clean up immediately any spills of hazardous materials.

- c) **Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?**

**Less than significant impact.** The proposed project site is approximately 0.18 mile northeast of the Orchard Park School. The proposed project consists of residential uses and would not routinely handle hazardous materials or emit hazardous air pollutants. This precludes the possibility of creating a significant hazard to the public or environment through reasonably foreseeable upset or accident conditions. Impacts would be less than significant.

- d) **Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?**

**Less than significant impact.** The California State Water Resources Control Board GeoTracker Database indicates that there are no hazardous cleanup sites on the project site. The nearest cleanup site is located approximately 240 feet east of the project site in the commercial shopping center. However, the cleanup status of the site is “Completed” and the case is closed as of August 30,



2001. The Department of Toxic Substances Control's EnviroStor Database indicates that there is a hazardous site on the project site. The hazardous site type is voluntary cleanup. The site was remediated by the City of Oakley Redevelopment Agency with removal of structures and excavation of petroleum-impacted soils. The site was certified on June 30, 2010. For these reasons, the impacts would be less than significant.

- e) **For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?**

**No impact.** The proposed project is 13.5 miles from Byron Airport, the nearest airport. This distance precludes the possibility of the project creating aviation safety risks for persons residing or working in the project vicinity. No impact would occur.

- f) **For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?**

**No impact.** The proposed project is 6.2 miles from Funny Farm Airstrip, the nearest private airstrip. This distance precludes the possibility of the project creating aviation safety risks for persons residing or working in the project vicinity. No impact would occur.

- g) **Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?**

**Less than significant impact.** The project's internal circulation system would consist of a network of six through streets and one cul-de-sac. External vehicular access would be taken from two points on Main Street. This would comply with the Fire Code's standards for emergency access. Additionally, the proposed project would not make any modifications to Main Street that would impair emergency response or evacuation. Impacts would be less than significant.

- h) **Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?**

**Less than significant impact.** The project site is within an urbanized portion of Oakley and surrounded by urban development and infrastructure. There are no wildlands near the project site. As such, the proposed project would not be exposed to wildland fires. Impacts would be less than significant.

## Mitigation Measures

None.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
<b>9. Hydrology and Water Quality</b> <i>Would the project:</i>				
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially alter the existing drainage pattern of area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j) Inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## Environmental Evaluation

Would the project:

**a) Violate any water quality standards or waste discharge requirements?**

**Less than significant impact.** Construction activity such as grading would reduce the project site's vegetation cover and increase the potential for soil erosion creating water quality impacts. As a result, the project would be required to prepare and implement a SWPPP in accordance with federal and state requirements. The SWPPP would identify BMPs that are intended to prevent erosion during construction activity.

At operation, the project would create impervious surfaces that could cause pollutants, such as motor oil from parked cars, to enter water bodies during storm events further degrading water quality. However, the project would install an on-site storm drainage system consisting of inlets, underground piping, and a bioretention basin. This stormwater system would be designed according to State and local regulations (including Provision C.3) in order to reduce peak runoff volume, prevent inundating downstream waterways, and reduce pollutant loads. These construction and operational features would ensure the proposed project would not applicable violate water quality standards. Impacts would be less than significant.

**b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted?)**

**Less than significant impact.** The proposed project would be served with potable water service provided by the Diablo Water District. The Diablo Water District's primary water supply is mostly surface water. Thus, the proposed project would not increase groundwater pumpage. Additionally, the proposed project's storm drainage system includes a bioretention basin area that would facilitate groundwater recharge. Thus, the development of the proposed project would not have the potential to substantially deplete groundwater supplies or interfere with groundwater recharge. Impacts would be less than significant.

**c) Substantially alter the existing drainage pattern of area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?**

**Less than significant impact.** The western portion of the project site contains vineyards while the eastern portion contains undeveloped land and mature trees. Most of the 20-acre project site would be hardscaped, except for the 84,077 square feet of park, open space, and bioretention basin area. The proposed project would install a storm drainage system consisting of inlets, underground piping, and a bioretention basin. The storm drainage system consists of a 42,511 square feet bioretention basin area. Runoff from the basin would be conveyed by a network of 18-inch and 24-inch-diameter pipes to the southwestern corner of the project site and discharged into an existing 42-inch-diameter storm drainage pipe, which runs parallel to the southern boundary of the project site. The

storm drainage system would be designed to detain and meter the release of peak runoff in order to avoid inundating downstream waterways in a manner that creates substantial erosion or siltation. Collectively, these features would ensure that the proposed project would not substantially alter existing drainage patterns such that substantial erosion or siltation occurs downstream. Impacts would be less than significant.

**d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?**

**Less than significant impact.** Most of the 20-acre project site would be hardscaped, except for the 84,077 square feet of park, open space, and bioretention basin area. The proposed project would install a storm drainage system consisting of inlets, underground piping, and a bioretention basin. Most of the stormwater runoff would be towards the 42,511 square feet bioretention basin area in the center portion of the project site. Runoff from the basin would be conveyed by a network of 18-inch and 24-inch-diameter pipes to the southwestern corner of the project site and discharged into an existing 42-inch-diameter storm drainage pipe, which runs parallel to the southern boundary of the project site. The storm drainage system would be designed to detain and meter the release of peak runoff in order to avoid inundating downstream waterways in a manner results in flooding. Collectively, these features would ensure that the proposed project would not substantially alter existing drainage patterns such that flooding occurs downstream. Impacts would be less than significant.

**e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?**

**Less than significant impact.** Most of the 20-acre project site would be hardscaped, except for the 84,077 square feet of park, open space, and bioretention basin area. The proposed project would install a storm drainage system consisting of inlets, underground piping, and a bioretention basin. Most of the stormwater runoff would be towards the 42,511 square feet bioretention basin area in the center portion of the project site. Runoff from the basin would be conveyed by a network of 18-inch and 24-inch-diameter pipes to the southwestern corner of the project site and discharged into an existing 42-inch-diameter storm drainage pipe, which runs parallel to the southern boundary of the project site. The storm drainage system would be designed to detain and meter the release of peak runoff in order to avoid inundating downstream waterways in a manner that exceeds the capacity of storm drainage facilities. Additionally, the on-site storm drainage system would include stormwater treatment features intended to prevent pollutants from leaving the project site. Collectively, these features would ensure that the proposed project would not contribute runoff that would exceed the capacity of downstream stormwater drainage systems or provide substantial additional sources of polluted runoff. Impacts would be less than significant.

**f) Otherwise substantially degrade water quality?**

**No impact.** The proposed project is residential in nature and does not include any features that would have the potential to otherwise substantially degrade water quality (underground storage

tanks, aboveground storage tanks, clarifiers, hazardous waste storage vessels, etc.). No impact would occur.

**g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?**

**No impact.** As determined by the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) No. 06013C0163G, the project site is located within Zone X, which is defined as area outside the with 0.2 percent annual chance floodplain (i.e., 500-year flood hazard area). As such, the proposed project would not place housing within a 100-year flood hazard area. No impact would occur.

**h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?**

**No impact.** As determined by the FEMA FIRM No. 06013C0163G, the project site is located within Zone X, which is defined as area outside the with 0.2 percent annual chance floodplain (i.e., 500-year flood hazard area). As such, the proposed project would not place housing within a 100-year flood hazard area. No impact would occur.

**i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?**

**No impact.** According to Figure 8-6 in the City of Oakley General Plan, the project site is not within a dam inundation area. The project site is not in an area of possible inundation as a result of a failure of a levee or dam. These conditions preclude inundation by levee or dam failure. No impacts would occur.

**j) Inundation by seiche, tsunami, or mudflow?**

**No impact.** The project site is not near any large inland bodies of water and is more than 50 miles from the Pacific Ocean, a condition that precludes inundation by tsunami. Seiches are waves on inland bodies of water typically created by seismic movement. The project site is not located near any inland bodies of water subject to seiches. Further, the project site is located in a relatively flat area and, therefore, would not be exposed to mudslides. For these reasons, the project site would not be subject to inundation by seiche, tsunami, or mudflow and no impact would occur.

## Mitigation Measures

None.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
<b>10. Land Use and Planning</b> <i>Would the project:</i>				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural communities conservation plan?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## Environmental Evaluation

Would the project:

**a) Physically divide an established community?**

**No impact.** The western portion of the project site contains vineyards while the eastern portion contains undeveloped land and mature trees. There are no dwelling units or other types of established communities on the site. Additionally, the project site does not serve as a linkage between neighboring land uses. This condition precludes the division of an established community. No impact would occur.

**b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?**

**Less than significant impact.** As part of the project, the applicant is proposing a General Plan Amendment and rezoning. The General Plan Amendment proposes to change the project site designation from Commercial/Light Industry to Single Family Residential-Low. The project proposes to rezone the project site from General Commercial to Planned Development. The current designations and zoning would be amended to reflect the characteristics of the proposed project. These land use changes are part of the proposed project and intended to achieve conformance with the applicable provisions of the General Plan and Oakley Zoning Ordinance. In this sense, they are considered “self-mitigating.” Impacts would be less than significant.

c) **Conflict with any applicable habitat conservation plan or natural communities conservation plan?**

**Less than significant impact with mitigation incorporated.** The proposed project is within the boundaries of the East Contra Costa County HCP/NCCP. The project site is located within Zone 1 and will be assessed a fee of \$12,457/acre. This fee will be collected at the time building permits are sought.

East Contra Coast County HCP/NCCP covered species that are applicable to the project site include:

- Western burrowing owl survey and direct take avoidance measures (refer to MM BIO-1)
- Swainson's hawk nest survey and direct take avoidance measures (refer to MM BIO-2)

With the implementation of mitigation, impacts would be reduced to a level of less than significant.

### Mitigation Measures

Implement MM BIO-1 and MM BIO-2.



Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
<b>11. Mineral Resources</b> <i>Would the project:</i>				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## Environmental Evaluation

Would the project:

- a) **Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State?**

**No impact.** The project site contains undeveloped land and does support mineral extraction activities. According to the Oakley 2020 General Plan Draft Environmental Impact Report (Draft EIR), the only mineral resource mined in the City of Oakley is sand. Thus, the project would have no impact regarding the loss of availability of a known mineral resource. No impact would occur.

- b) **Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?**

**No impact.** The project site contains undeveloped land and does support mineral extraction activities. According to the Oakley 2020 General Plan Draft EIR, the only mineral resource mined in the City of Oakley is sand. The Plan does not identify the project site as a source of locally important mineral resources. No impact would occur.

## Mitigation Measures

None.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
<b>12. Noise</b> <i>Would the project result in:</i>				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## Environmental Evaluation

Would the project result in:

- a) **Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?**

### Land Use Compatibility

#### Short Term Construction Impacts

**Less than significant with mitigation incorporated.** A significant impact would occur if construction activities were to take place outside of the permissible hours established by the City's Municipal Code in Section 4.2.208. This ordinance prohibits construction activities adjacent to residential land uses except during the hours of 7:30 a.m. to 7:00 p.m., Monday through Friday, and 9:00 a.m. to 7:00 p.m. on Saturdays, Sundays, and holidays.

Two types of short-term noise impacts would occur during site preparation and project construction. The first type would result from the increase in traffic flow on local streets, associated with the transport of workers, equipment, and materials to and from the project site. The transport of workers and construction equipment and materials to the project site would incrementally increase noise levels on access roads leading to the site. Because workers and construction equipment would use existing routes, noise from passing trucks would be similar to existing vehicle-generated noise on these local roadways. For this reason, short-term intermittent noise from trucks would be minor when averaged over a longer time-period and would not be expected to exceed existing peak noise levels in the project vicinity. Therefore, short-term construction-related impacts associated with worker commute and equipment transport to the project site would be less than significant.

The second type of short-term noise impact is related to noise generated during construction on the project site. Construction noise levels are rarely steady in nature and often fluctuate depending on the type and number of equipment being used at any given time. In addition, there could be times where large equipment is not operating and noise would be at or near normal ambient levels. Construction is completed in discrete steps, each of which has its own mix of equipment and its own noise characteristics. These various sequential phases would change the character of the noise generated on the site and, therefore, the noise levels surrounding the site as construction progresses. Despite the variety in the type and size of construction equipment, similarities in the dominant noise sources and patterns of operation allow construction related noise ranges to be categorized by work phase.

The site preparation phase, which includes excavation and grading activities, tend to generate the highest noise levels because the noisiest construction equipment is earthmoving equipment. Earthmoving equipment includes excavating machinery and compacting equipment, such as bulldozers, draglines, backhoes, front loaders, roller compactors, scrapers, and graders. Typical operating cycles for these types of construction equipment may involve 1 or 2 minutes of full power operation followed by 3 or 4 minutes at lower power settings. Operating cycles for these types of construction equipment may involve 1 or 2 minutes of full power operation followed by 3 or 4 minutes at lower power settings.

The highest noise levels would be generated during site preparation, ground clearing, excavation, and foundation construction, as these phases require the use of the heaviest, and loudest, pieces of construction equipment. Large pieces of earthmoving equipment, such as graders, excavators, and bulldozers, generate maximum noise levels of 80 A-weighted decibel (dBA) to 85 dBA  $L_{max}$  at a distance of 50 feet. These noise levels drop off, or attenuate, at a rate of about 6 dBA to 7.5 dBA per doubling of distance between the noise source and receptor. As construction moves away from noise-sensitive receptors, noise levels generated by heavy construction will be lower. A characteristic of noise is that each doubling of the sound sources with equal strength increases the noise level by 3 dBA. Assuming that each piece of construction equipment operates at some distance from the other equipment, combined noise levels during this phase of construction would range up to 90 dBA  $L_{max}$ , with a worst-case hourly average of up to 86 dBA  $L_{eq}$  at a distance of 50 feet from the acoustical center of an active construction area. The acoustical center reference is used because construction equipment must operate at some distance from one another on a project site, and the combined noise level as measured at a point equidistant from the sources would be the worst-case maximum noise level.

The closest existing noise-sensitive land use to the proposed project site is The Oaks multi-family residential complex, directly south of the project site. The property line of the closest of these units would be located approximately 110 feet from the acoustic center of the nearest construction footprint where multiple pieces of heavy construction equipment could operate simultaneously. A 10-foot sound wall along the northern boundary of this multi-family residential complex would further reduce noise from construction activities on the project site. At this distance, worst-case construction noise levels could range up to approximately 74 dBA  $L_{\max}$  intermittently, and could have an hourly average of up to 70 dBA  $L_{\text{eq}}$  at nearest sensitive receptor.

Although there could be a relatively high single event noise exposure potential causing an intermittent noise nuisance, the effect of project-related construction noise levels on longer-term (hourly or daily) ambient noise levels would be small but could result in annoyance or sleep disturbances at nearby sensitive receptors. Therefore, noise producing construction activities shall be restricted to weekday hours between 7:30 a.m. and 7:00 p.m., and weekend and holiday hours between 9:00 a.m. and 7:00 p.m. Restricting construction activities to these stated time-periods, as well as implementing the best management noise reduction techniques and practices (both outlined in MM NOI-1), would ensure that construction noise would not result in sleep disturbances at nearby off-site sensitive receptors or expose persons to noise levels in excess of established standards. Therefore, with implementation of MM NOI-1, restricting the permissible hours of construction and requiring implementation of best management noise reduction techniques and practices, the potential short-term construction noise impacts on sensitive receptors near the project site would be reduced to less than significant.

### **Mobile Source Noise Impacts**

**Less than significant with mitigation incorporated.** A significant impact would occur if implementation of the project would expose persons residing, visiting, or working at the project site or in the project vicinity to noise levels in excess of the land use compatibility standards established in the Noise Element of the City of Oakley's General Plan. According to these standards, noise environments up to 60 dBA  $L_{\text{dn}}$  are considered "normally acceptable" for new single-family residential land use developments. Environments with ambient noise levels from 60 dBA to 70 dBA  $L_{\text{dn}}$  are considered "conditionally acceptable" for new single-family residential land use developments; as such, development may be permitted only after detailed analysis of the noise reduction requirements and needed noise insulation features are included in the project design. Conventional construction, but with closed windows and a fresh air supply system or air conditioning, will normally suffice as a noise insulation feature for these "conditionally acceptable" environments. Additionally, the City's Noise Element establishes noise level performance standards for new projects affected by or including transportation noise sources. For transportation noise sources, noise levels must not exceed 65 dBA  $L_{\text{dn}}$  in outdoor activity areas, and 45 dBA  $L_{\text{dn}}$  in interior spaces, of residential homes.

The Federal Highway Administration (FHWA) highway traffic noise prediction model (FHWA RD-77-108) was used to evaluate existing and cumulative traffic noise conditions in the vicinity of the project site. The projected traffic noise levels along roadways adjacent to the project site were analyzed to determine compliance with the City's noise and land use compatibility standards. The

daily traffic volumes were obtained from the traffic analysis prepared for the project by TJKM (2018). The resultant noise levels were weighed and summed over a 24-hour period in order to determine the  $L_{dn}$  values. The traffic noise modeling input and output files are included in Appendix E of this document. Table 20 shows a summary of the traffic noise levels for existing, existing plus project, background, and background plus project conditions as measured at 50 feet from the centerline of the outermost travel lane.

**Table 20: Traffic Noise Model Results Summary**

Roadway Segment	Existing (dBA) $L_{dn}$	Existing Plus Project (dBA) $L_{dn}$	Increase over Existing (dBA)	Background (dBA) $L_{dn}$	Background Plus Project (dBA) $L_{dn}$	Increase over Background (dBA)
Main Street—Neroly Road to Live Oak Avenue	67.3	67.5	0.2	69.5	69.7	0.2
Main Street—Live Oak Avenue to project site	67.3	67.6	0.3	69.5	69.7	0.2
Main Street—project site to Big Break Road	67.0	67.1	0.1	69.3	69.4	0.1
Source: FCS, 2018.						

The projected traffic noise levels along Main Street adjacent to the project site would range up to 69.7 dBA  $L_{dn}$  as measured at 50 feet from the centerline of the outermost travel lane under background plus project conditions. The façade of the home closest to this roadway would be setback approximately 85 feet from the centerline of this roadway segment. At this distance, traffic noise levels would range up to approximately 68 dBA  $L_{dn}$  under background plus project conditions.

There is also existing rail activity north of the project site. The combined railroad and traffic noise levels at the project's northern boundary were documented through an ambient noise monitoring effort. Two consecutive 24-hour noise measurements were conducted in the northeast corner of the project site, at 55 feet from the centerline of the roadway, between December 10 and 12, 2018. The noise measurement data is contained in Appendix E. These two 24-hour noise measurements show that combined railroad and traffic noise levels at this location range up to 73 dBA  $L_{dn}$ , which exceed the City's "conditionally acceptable" threshold. The façade of the home closest to this roadway would be setback approximately 85 feet from the centerline of this roadway segment. At this distance, combined traffic and railroad noise levels would range up to approximately 70 dBA  $L_{dn}$  under background plus project conditions. This would be a significant impact and mitigation would be required.

Implementation of a minimum 8-foot high soundwall along the northern property line bordering Main Street, would reduce traffic and railroad noise levels by 10 dBA at the proposed outdoor active use areas of the proposed land uses. This would reduce traffic and railroad noise levels to below 61 dBA  $L_{dn}$ , which is within the City's "conditionally acceptable" range for new residential development.

Regarding indoor sound levels, the project must incorporate design features that would ensure the interior noise level standard of 45 dBA  $L_{dn}$  would be maintained. Based on the EPA Protective Noise Levels<sup>4</sup>, with a combination of walls, doors, and windows, standard construction in accordance with building code requirements for multi-family residential developments would provide 25 dBA in exterior-to-interior noise reduction with windows closed and 15 dBA or more with windows open. With windows open, the interior noise levels of the proposed units nearest to and facing the railroad lines would not meet the City's interior noise standard of 45 dBA  $L_{dn}$  for indoor sleeping areas (61 dBA–15 dBA = 46 dBA). However, implementation of air conditioning systems would allow windows to remain closed and would be sufficient to reduce noise levels on the first floor to meet the interior noise level standard of 45 dBA  $L_{dn}$  (61 dBA–25 dBA = 36 dBA). Air conditioning units would give an occupant the option of controlling noise by keeping the windows shut.

However, an 8-foot high soundwall would not provide the same shielding against road and train noise to rooms on the second floor of the proposed homes. As stated above, combined railroad and traffic noise levels would range up to approximately 70 dBA  $L_{dn}$  under background plus project conditions at the nearest façade that would have a direct line of sight to the roadway and railroad. Therefore, even with implementation of air conditioning systems to allow windows to remain closed would not sufficiently reduce noise levels on the second floor to meet the interior noise level standard of 45 dBA  $L_{dn}$  (70 dBA–25 dBA = 50 dBA).

To meet the City's interior noise level standard, the project must incorporate upgraded wall assemblies (windows, doors, and wall combinations) for second floor units that would have a direct line of sight to Main Street and the railroad. As outlined in MM NOI-2, for all proposed homes within 100 feet of the centerline of Main Street, all wall assemblies that would have a direct line of sight to Main Street must be upgraded to have a combined minimum standard transmission class (STC) rating of STC-33 (70 dBA–33 dBA = 42 dBA).

The wall assemblies of these indicated façades must be upgraded to perform at the indicated minimum STC ratings in order to provide the necessary exterior to interior noise attenuation within a reasonable margin of safety. Quality control must be exercised in construction to ensure all air-gaps and penetrations of the building shell are controlled and sealed. Implementation of these façade upgrades (as outlined in MM NOI-2) would be required to reduce noise exposure to levels that are within the City's land use compatibility standards and to ensure the interior noise standard is met.

### ***Stationary Source Noise Impacts to On-site Receptors***

**Less than significant with mitigation incorporated.** A significant impact would occur if implementation of the project would expose persons residing, visiting, or working at the project site or in the project vicinity to noise levels in excess of City's noise level performance standards for new projects affected by non-transportation noise sources. For non-transportation noise sources, noise levels must not exceed 55 dBA  $L_{eq}$  between the daytime hours of 7:00 a.m. and 10:00 p.m., and 45 dBA  $L_{eq}$  between the nighttime hours of 10:00 p.m. and 7:00 a.m., as measured immediately within the property line of lands designated for noise-sensitive uses.

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<sup>4</sup> EPA 550/9-79-100, November 1978

The dominant stationary noise sources in the project vicinity are the loading dock operations to the east of the project site. Noise levels from typical loading/unloading activities range from 60 dBA to 70 dBA  $L_{max}$ . Typical hourly average loading/unloading activities as measured at 50 feet from a loading dock would range up to 62 dBA  $L_{eq}$ . The nearest sensitive receptors are the proposed residential homes approximately 65 feet from the loading dock. At this distance, noise levels from loading/unloading activities could range up to approximately 60 dBA  $L_{eq}$ . This noise level would exceed the City's daytime noise level performance standard of 55 dBA  $L_{eq}$ . This would be a significant impact and mitigation would be required.

Implementation of a minimum 8-foot high soundwall along the eastern property line (as outlined in MM NOI-3) would reduce loading/unloading noise levels by a minimum of 12 dBA at the proposed outdoor active use areas of the proposed land uses. This would reduce noise levels to below 48 dBA  $L_{eq}$  as received by the nearest sensitive receptors. Therefore, implementation of MM NOI-3 would be required to reduce stationary source noise impacts to meet the City's noise performance standards.

Delivery activity and associated loading/unloading activities occur less frequently during nighttime hours than during daytime hours at this location. When averaged with the lower nighttime ambient noise levels, loading/unloading activities would not be expected to exceed the City's nighttime noise level performance standard of 45 dBA  $L_{eq}$  as measured at the nearest residential receptor with implementation of an 8-foot high soundwall.

### ***Operational Noise Impacts to Off-site Receptors***

**Less than significant impact.** A significant impact would occur if operational noise levels associated with the proposed project's stationary noise sources exceed the City's noise level performance standards as measured at receiving noise sensitive land uses. For non-transportation noise sources, noise levels must not exceed 55 dBA  $L_{eq}$  between the daytime hours of 7:00 a.m. and 10:00 p.m., and 45 dBA  $L_{eq}$  between the nighttime hours of 10:00 p.m. and 7:00 a.m., as measured immediately within the property line of lands designated for noise-sensitive uses. The proposed project would include new stationary noise sources such as mechanical ventilation equipment. These sources could affect noise-sensitive receptors in the project vicinity.

#### ***Mechanical Equipment Operations***

At the time of preparation of this analysis, details were not available pertaining to proposed mechanical ventilation systems for the project; therefore, a reference noise level for typical mechanical ventilation systems was used for this part of the analysis, which ranges up to approximately 60 dBA  $L_{eq}$  at a distance of 25 feet. Mechanical ventilation systems could be located as close as 80 feet from the nearest off-site receptor, which is the multi-family residential complex located south of the project site. The existing 10-foot high sound wall along the boundary of this multi-family residential complex would further reduce noise from mechanical ventilation operation on the project site. At this distance, and with attenuation provided by the existing soundwall, noise generated by mechanical ventilation equipment would attenuate to approximately 42 dBA  $L_{eq}$  at this nearest sensitive receptor. These noise levels would not exceed the City's maximum noise limit standard of 55 dBA  $L_{eq}$  during the daytime hours of 7 a.m. to 10 p.m.; and would not exceed the nighttime noise standard of 45 dBA  $L_{eq}$ . Therefore, implementation of the project would not expose



persons to noise levels in excess of standards established in the local general plan or noise ordinance, and the impact of mechanical ventilation equipment operational noise levels on sensitive off-site receptors would be less than significant.

**b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?**

**Less than significant impact.** Groundborne vibrations consist of rapidly fluctuating motions within the ground that have an average motion of zero. Vibrating objects in contact with the ground radiate vibration waves through various soil and rock strata to the foundations of nearby buildings.

Although groundborne vibration can be felt outdoors, it is typically only an annoyance to people indoors where the associated effects such as the shaking of a building can be notable. When assessing annoyance from groundborne vibration, vibration is typically expressed as root mean square (rms) velocity in units of decibels of 1 micro-inch per second. To distinguish these vibration levels referenced in decibels from noise levels referenced in decibels, the unit is written as “VdB.”

In extreme cases, excessive groundborne vibration has the potential to cause structural damage to buildings. Common sources of groundborne vibration include construction activities such as blasting, pile driving and operating heavy earthmoving equipment. However, construction vibration impacts on building structures are generally assessed in terms of peak particle velocity (PPV). For purposes of this analysis, project related impacts are expressed in terms of PPV.

*Short-term Construction Vibration Impacts*

Of the variety of equipment that would be used during construction, small vibratory rollers would produce the greatest groundborne vibration levels. Impact equipment such as pile drivers is not expected to be used during construction of this project. Small vibratory rollers produce groundborne vibration levels ranging up to 0.101 inch per second (in/sec) PPV at 25 feet from the operating equipment.

The off-site structure nearest to the proposed construction areas where heavy construction equipment would operate is the Cypress Shopping Center east of the project site. The closest facade of this structure would be located approximately 70 feet from the proposed construction footprint. At this distance, groundborne vibration levels would attenuate to 0.022 in/sec PPV from the operation of a small vibratory roller. This is below the industry standard vibration damage criteria of 0.3 in/sec PPV for this type of structure, a building of engineered concrete and masonry (no plaster). Therefore, construction-related groundborne vibration impacts would be considered less than significant.

*Operational Vibration Impacts*

Implementation of the project would not include any new permanent sources that would expose persons in the project vicinity to groundborne vibration levels that could be perceptible without instruments at any existing sensitive land use in the project vicinity. Therefore, project operational groundborne vibration level impacts would be considered less than significant.

**c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?**

**Less than significant impact.** Significant noise impacts to off-site receptors would occur if the project would result in a substantial increase in ambient noise levels compared with noise levels existing without the project. A change of 3 dBA is the lowest change that can be perceptible to the human ear in outdoor environments, while a change of 5 dBA is considered the minimum readily perceptible change to the human ear in outdoor environments. Therefore, for purposes of this analysis, the proposed project would result in a significant noise impact if it resulted in an increase in existing ambient noise levels by 5 dBA or greater as measured at off-site sensitive receptor land uses.

The highest traffic noise level increase with implementation of the project would occur along Main Street adjacent to the project site under background plus project conditions. The project would result in traffic noise levels ranging up to 69.7 dBA community noise equivalent level (CNEL), an increase of 0.2 dBA along this roadway segment compared to noise levels existing without the project. This increase would not be perceptible and would be well below the threshold of a 5 dBA increase that would be considered a substantial permanent increase. Therefore, project-related traffic noise impacts on existing ambient noise levels would be less than significant.

The proposed project would include new stationary noise sources such as mechanical ventilation equipment. As shown in impact discussion in Section 12 a), noise generated by mechanical ventilation equipment would attenuate to approximately 42 dBA  $L_{eq}$  at the nearest off-site sensitive receptor. These noise levels are well below the documented background ambient noise levels at the nearest sensitive receptors in the project vicinity. Therefore, project-related mechanical equipment operation would not result in a substantial permanent increase in ambient noise levels, and would be a less than significant impact.

**d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?**

**Less than significant with mitigation incorporated.** As discussed in impact discussion in Section 12 a), reasonable worst-case construction noise levels could range up to approximately 74 dBA  $L_{max}$  intermittently, and could have an hourly average of up to 70 dBA  $L_{eq}$  at the nearest sensitive receptor. This noise would result from the temporary use of heavy construction equipment. Compliance with the City's noise performance standard for construction activities, as well as the implementation of MM NOI-1, would ensure that construction noise would not result in substantial temporary increase in ambient noise levels (noise levels that could result in sleep disturbances at nearby off-site sensitive receptors) and the impact would be less than significant.

**e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?**

**No impact.** There are no airports within 2 miles of the project site. The nearest airport is the Byron Airport, located approximately 13 miles south of the project site. Because of the distance from this

airport, the project site is located outside of the 55 dBA CNEL airport noise contours. No impact would occur.

**f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?**

**No Impact.** The nearest private airstrip is Funny Farm Airport, located approximately 6 miles southeast of the project site. This distance precludes the possibility of the proposed project exposing persons residing or working in the project vicinity to excessive aviation noise associated with a private airstrip. No impact would occur.

## Mitigation Measures

- MM NOI-1** To reduce potential construction noise impacts during project construction, the following multi-part mitigation measure shall be implemented for the project:
- All construction equipment powered by internal combustion engines shall be properly muffled and maintained.
  - Quiet construction equipment, particularly air compressors, are to be selected whenever possible.
  - All stationery noise-generating construction equipment such as tree grinders and air compressors are to be located as far as is practical from existing residences. In addition, the project contractor shall place such stationary construction equipment so that emitted noise is directed away from sensitive receptors nearest the project site.
  - Unnecessary idling of internal combustion engines is prohibited.
  - The construction contractor shall, to the maximum extent practical, locate on-site equipment staging areas so as to maximize the distance between construction-related noise sources and noise-sensitive receptors nearest the project site during all project construction.
  - Use of pile drivers, sources of impulsive sound and jack hammers shall be prohibited on Sundays and holidays, except for emergencies or as approved in advance by the Building Official.
  - The construction contractor shall limit noise producing construction activity to weekday hours between 7:30 a.m. and 7:00 p.m., and weekend and holiday hours between 9:00 a.m. and 7:00 p.m.
- MM NOI-2** To reduce traffic and train noise impacts to the proposed residential homes, the following multi-part mitigation measure shall be implemented for the project:
- The project shall include an 8-foot sound wall along the northern boundary of the project site. This wall must wrap around the sides of the proposed homes adjacent to the two project driveways, wrapping at least 50 feet along the sides of these homes, as measured from the project property line adjacent to Main Street.

- All proposed homes in this project must have air conditioning system that would allow windows to remain closed for prolonged periods.
- For all proposed homes within 100 feet of the centerline of Main Street, all wall assemblies (windows, doors, and wall combinations) that have a direct line of sight to Main Street must be upgraded to have a combined minimum standard transmission class (STC) rating of STC-33.

**MM NOI-3** To reduce noise impacts to the proposed residential homes from loading/unloading activities, the project must include an 8-foot sound wall along the full length of the eastern boundary of the project site.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
<b>13. Population and Housing</b> <i>Would the project:</i>				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## Environmental Evaluation

Would the project:

- a) **Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?**

**Less than significant impact.** The proposed project would develop 154 dwelling units. Using the City of Oakley's 2018 persons per household estimate of 3.45 persons, the project would add 528 residents. The project site contemplated to support urban development by the City of Oakley General Plan. Thus, the addition of 532 residents to City of Oakley would represent planned growth. Furthermore, the project site is within an urbanized portion of Oakley served with urban infrastructure and services. Thus, the development of the proposed project would not remove a barrier to growth. Impacts would be less than significant.

- b) **Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?**

**Less than significant impact.** The project site does not contain any existing dwelling units. Thus, no housing would be displaced. No impact would occur.

- c) **Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?**

**No impact.** The project site does not contain any existing dwelling units. Thus, no persons would be displaced. No impact would occur.

## **Mitigation Measures**

None.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
<b>14. Public Services</b> <i>Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:</i>				
a) Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

## Environmental Evaluation

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

### a) Fire protection?

**Less than significant impact.** The East Contra Costa Fire Protection District provides fire protection services to the City of Oakley. The proposed project would add 532 residents to the City's population and, thus, increase demand for fire protection. The project site is located 1.30 miles northwest from Station 53 (530 O'Hara Avenue). Using an average speed of 35 miles per hour, a fire engine would be able to reach the project site in 2 minutes, 13 seconds, which would be considered an acceptable response time. The project site would be accessed via Main Street and have a 36-foot internal roadways, which would provide sufficient width and turning radii for a ladder truck. The proposed project would be subject to impact fees established by the City of Oakley Municipal Code Section 9.2.502 and stated by Policy 4.4.2 in the General Plan. The impact fees would mitigate potential impacts caused by an increased demand on fire protection services that may result from the proposed project. Additionally, all new construction would be required to meet Fire Code requirements for fire detection and suppression. For these reasons, the proposed project would not create a need for new or expanded fire facilities. Impacts would be less than significant.

### b) Police protection?

**Less than significant impact.** The Oakley Police Department provides law enforcement to the City of Oakley. The proposed project would add 532 residents to the City's population and, thus, increase



demand for police protection. The project site is located within an urbanized portion of Oakley that is routinely patrolled by the Oakley Police Department. Furthermore, the proposed project would provide street lighting, visible open spaces, and two gated connections with Main Street. Collectively, these measures would serve to deter criminal activity. In addition, the proposed project would be subject to development impact fees. For these reasons, the proposed project would not create a need for new or expanded police facilities. Impacts would be less than significant.

**c) Schools?**

**Less than significant impact.** The project site is within the Oakley Union Elementary School District, which provides K-8 education, and the Liberty Union High School District, which provides 9-12 education. The proposed project would develop 154 dwelling units. Using a standard student generation rate of 0.5 student/dwelling unit, the proposed project would add 266 students to K-12 schools. The applicant would be required to pay development fees to the School District to fund capital improvements to school facilities. Pursuant to Government Code Section 65995, payment of development fees is “full and complete mitigation” for impacts on schools. Impacts would be less than significant.

**d) Parks?**

**Less than significant impact.** The proposed project would add 532 residents to the City of Oakley’s population. These residents would increase demand for parks and recreational facilities. The proposed project would include a 0.6-acre park. Additionally, the proposed project would provide park fees to the City of Oakley for the development of park facilities elsewhere in Oakley. As such, the project would offset its demand for new parks. Impacts would be less than significant.

**e) Other public facilities?**

**Less than significant impact.** The proposed project would add 532 residents to the City of Oakley’s population. These residents would increase demand for library services and community facilities. The project applicant would provide development fees in accordance with the City of Oakley’s development fee schedule. Impacts would be less than significant.

## Mitigation Measures

None.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
<b>15. Recreation</b>				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

## Environmental Evaluation

- a) **Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?**

**Less than significant impact.** The proposed project would add 532 residents to the City of Oakley's population. These residents would increase demand for parks and recreational facilities. The proposed project would include a 0.6-acre park. Additionally, the proposed project would provide park fees to the City of Oakley for the development of park facilities elsewhere in Oakley. As such, the proposed project would not increase the use of existing neighborhood or regional parks such that physical deterioration would occur. Impacts would be less than significant.

- b) **Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?**

**Less than significant impact.** The proposed project includes a 0.6-acre park. The environmental effects of the park are evaluated in this IS/MND. No off-site park or recreational facilities would be constructed. Impacts would be less than significant.

## Mitigation Measures

None.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
<b>16. Transportation/Traffic</b> <i>Would the project:</i>				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The analysis in this section is based on the TIA prepared by TJKM Transportation Consultants. The reported is provided in Appendix F.

## Environmental Evaluation

Would the project:

- a) **Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?**

**Less than significant with mitigation incorporated.** TJKM Transportation Consultants prepared a study to evaluate the transportation impacts of the project. Trip generation associated with the proposed project is summarized in Table 21. The project is expected to generate approximately 1,454 daily vehicle trips, including approximately 114 AM peak-hour and 152 PM peak-hour trips.

**Table 21: Project Vehicle Trip Generation Estimates**

Land Use	Size	Daily Vehicle Trips		AM Peak Hour Vehicle Trips					PM Peak Hour Vehicle Trips				
		Rate	Trips	Rate	In %	In	Out	Total	Rate	In %	In	Out	Total
Single Family Detached Housing (ITE land use code 210)	194 du <sup>1</sup>	9.44	1,454	0.74	25%	29	85	114	0.99	63%	96	56	152
Total:			1,454	114					152				
Notes: <sup>1</sup> du = dwelling units. Source: TJKM Transportation Consultants, 2018.													

### Existing Plus Project Conditions

The potential impacts were evaluated relative to the level of service (LOS) policies and methodologies applicable in the City of Oakley. Table 22 summarizes peak-hour LOS of intersection with project traffic volume added to the existing traffic volume.

**Table 22: Existing Plus Project Conditions Traffic Level of Service Summary**

Intersection	Control	Peak Hour	Existing Conditions		Existing plus Project Conditions		
			Delay <sup>1</sup>	LOS <sup>2</sup>	Delay	LOS	Significant LOS Impact?
Bridgehead Road-Neroly Road/Main Street	Signalized	AM	21.4	C	21	C	No
		PM	23.2	C	24.1	C	No
Live Oak Road/Main Street	Signalized	AM	14.8	B	15.5	B	No
		PM	9.9	A	10.7	B	No
Big Break Road/Main Street	Signalized	AM	11.5	B	11.5	B	No
		PM	14.1	B	14.1	B	No

**Table 22 (cont.): Existing Plus Project Conditions Traffic Level of Service Summary**

Intersection	Control	Peak Hour	Existing Conditions		Existing plus Project Conditions		
			Delay <sup>1</sup>	LOS <sup>2</sup>	Delay	LOS	Significant LOS Impact?
Empire Avenue/Main Street	Signalized	AM	19.0	B	19.3	B	No
		PM	19.4	B	19.5	B	No
Empire Avenue/Oakley Road	Signalized	AM	28.7	C	28.6	C	No
		PM	31.5	C	31.4	C	No
Neroly Road/Live Oak Avenue	All-way Stop	AM	23.5	C	26.2	D	No
		PM	13.8	B	14.4	B	No
Live Oak Avenue/Oakley Road	All-way Stop	AM	15.3	C	16.5	C	No
		PM	9.3	A	9.5	A	No
Neroly Road/Laurel Road	All-way Stop	AM	11.6	B	12.0	B	No
		PM	8.3	A	8.3	A	No
Main Street/West Driveway	Side-street Stop	AM	0.0	A	39.4	<b>E</b>	<b>No<sup>3</sup></b>
		PM	12.6	B	46.7	<b>E</b>	<b>No<sup>3</sup></b>
Main Street/East Driveway (proposed)	Side-street Stop	AM	n/a	—	24.0	C	No
		PM	n/a	—	44.0	<b>E</b>	<b>No<sup>3</sup></b>

Notes:  
 Bold text indicates unacceptable intersection operations.  
<sup>1</sup> Delay: Average control delay in seconds per vehicle, reported values are overall for signalized and all-way-stop-control intersections; and critical minor approaches for two-way-stop-control intersections.  
<sup>2</sup> LOS: Level of Service.  
<sup>3</sup> LOS reflects delay to traffic exiting the project site and approaching the stop sign on Main Street, prior to turning on to Main Street. Impact is less significant because the volume of traffic exiting the project site (less than 100 peak-hour vehicles exiting via two driveways) would not trigger a signal warrant at either driveway.  
 Source: TJKM Transportation Consultants, 2018.

As shown in Table 22, although the project would increase the total number of trips, it would not decrease the LOS at any study intersection below acceptable levels. At the Main Street/West Driveway intersection and Main Street/proposed East Driveway intersection, the LOS reflects delay to traffic exiting the project site and approaching the stop sign on Main Street, prior to turning on to Main Street. The impact would be less significant because the volume of traffic exiting the project site (less than 100 peak-hour vehicles exiting via two driveways) would not trigger a signal warrant at either driveway. The results of the intersection LOS analysis show that the proposed project would not result in a significant impact at any of the study intersections under Existing and Existing plus Project conditions. The impact would be less than significant.

### **Cumulative Conditions**

Table 23 summarizes peak-hour LOS of intersection under Cumulative traffic conditions. As shown, the project would contribute to increased delay at three study intersections that would operate unacceptably without the proposed project.

**Table 23: Cumulative Traffic Level of Service Summary**

Intersection	Control	Peak Hour	Cumulative Conditions		Cumulative plus Project Conditions		
			Delay <sup>1</sup>	LOS <sup>2</sup>	Delay	LOS	Significant LOS Impact?
Bridgehead Road-Neroly Road/Main Street	Signalized	AM	39.6	D	43.3	D	No
		PM	<b>&gt;80</b>	<b>F</b>	<b>&gt;80</b>	<b>F</b>	<b>Yes<sup>4</sup></b>
Live Oak Road/Main Street	Signalized	AM	26.8	C	29.9	C	No
		PM	36.7	D	49.9	B	No
Big Break Road/Main Street	Signalized	AM	13.5	B	13.5	B	No
		PM	19.5	B	20.2	C	No
Empire Avenue/Main Street	Signalized	AM	31.9	C	36.1	D	No
		PM	<b>66.7</b>	<b>E</b>	<b>68.6</b>	<b>E</b>	<b>Yes<sup>5</sup></b>
Empire Avenue/Oakley Road	Signalized	AM	36.3	D	36.1	D	No
		PM	46.1	D	45.8	D	No
Neroly Road/Live Oak Avenue	All-way Stop	AM	<b>45.0</b>	<b>E</b>	<b>&gt;50</b>	<b>F</b>	<b>Yes<sup>6</sup></b>
		PM	10.5	B	22.0	C	No
Live Oak Avenue/Oakley Road	All-way Stop	AM	21.2	C	23.6	C	No
		PM	10.8	B	11.3	B	No
Neroly Road/Laurel Road	All-way Stop	AM	21.7	C	23.1	C	No
		PM	10.5	B	10.8	A	No
Main Street/West Driveway	Side-street Stop	AM	0.0	A	<b>&gt;50</b>	<b>F</b>	<b>No<sup>3</sup></b>
		PM	18.2	C	<b>&gt;50</b>	<b>F</b>	<b>No<sup>3</sup></b>
Main Street/East Driveway (proposed)	Side-street Stop	AM	n/a	-	<b>&gt;50</b>	<b>F</b>	<b>No<sup>3</sup></b>
		PM	n/a	-	<b>&gt;50</b>	<b>F</b>	<b>No<sup>3</sup></b>

Notes:

Bold text indicates unacceptable intersection operations.

<sup>1</sup> Delay: Average control delay in seconds per vehicle, reported values are overall for signalized and all-way-stop-control intersections; and critical minor approaches for two-way-stop-control intersections.

<sup>2</sup> LOS: Level of Service.

<sup>3</sup> LOS at both project driveways reflects peak-hour delay to traffic exiting the project approaching Main Street on a side-street stop-controlled approach. Impact is less than significant because the side-street approach volume does not warrant signalization.

<sup>4</sup> Recommended cumulative mitigation at the Bridgehead Road-Neroly Road/Main Street intersection is for the project to contribute to the cost of the future installation of one additional eastbound through lane (thus providing three eastbound through lanes through the intersection before narrowing to two eastbound through lanes). With this mitigation: LOS under Background plus Project conditions would improve to acceptable LOS D (26 seconds average delay).

<sup>5</sup> LOS: Level of Service.

<sup>6</sup> Recommended cumulative mitigation is for the project to contribute towards the cost of installing a future traffic signal at the Neroly Road/Live Oak Avenue Intersection. With this mitigation, the intersection would operate at an acceptable LOS D (39.2 seconds of average delay) under Background plus Project conditions (mitigated).

Source: TJKM Transportation Consultants, 2018.

At the Main Street/West Driveway intersection and Main Street/proposed East Driveway intersection, the LOS at both project driveways reflects peak-hour delay to traffic exiting the project approaching Main Street on a side-street stop-controlled approach. Impact is less than significant because the side-street approach volume does not warrant signalization.

The Bridgehead Road-Neroly Road/Main Street intersection is forecast to operate at unacceptable LOS F during the PM peak-hour under Background Conditions without and with the proposed project. MM TRANS-1 would require the project applicant to pay the fair share cost of the future installation of one additional eastbound through lane (thus providing three eastbound through lanes through the intersection before narrowing to two eastbound through lanes). With the implementation of MM TRANS-1, the LOS would improve to an acceptable LOS D (26 seconds average delay).

The Empire Avenue/Main Street intersection is forecast to operate at unacceptable LOS E during the PM peak-hour under Background Conditions without and with the proposed project. The anticipated unacceptable delay is primarily due to anticipated increases in through movement volume on Main Street, highest in the eastbound direction during the PM peak-hour, and an increase in left-turns from Main Street to Empire Street in both directions. MM TRANS-2 would require an installation of one additional eastbound through lane, which would improve LOS C (33 seconds of average delay).

The stop-sign controlled intersection of Neroly Road/Live Oak Avenue is forecast to operate at LOS E during the AM peak-hour under Background Conditions without and with the proposed project. MM TRANS-3 would require the project applicant to pay the fair share cost of installing a future traffic signal at the intersection. With the implementation of MM TRANS-3, the intersection would operate at an acceptable LOS D (30.2 seconds of average delay).

All other intersections would operate at an acceptable level of service. With the implementation of MM TRANS-1, MM TRANS-2, and MM TRANS-3, impacts would be less than significant.

- b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?**

**Less than significant impact with mitigation incorporated.** Main Street/Neroly Road and Main Street/Empire Avenue are Congestion Management Plan Network intersections. As discussed previously, implementation of MM TRANS-1 and MM TRANS-2 would mitigate project's impacts on these intersections and, thus, the project would not conflict with the level of service standards of the Congestion Management Plan. As such, impacts would be less than significant.

- c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?**

**No impact.** The proposed project is 13.5 miles from Byron Airport, the nearest airport. This distance precludes the possibility of the project creating aviation safety risks for persons residing or working in the project vicinity. No impact would occur as the project would neither involve use of air transit, nor is it expected to cause any change in air traffic patterns.

**d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?**

**Less than significant impact.** The project's internal circulation system would consist of a network of six through streets and one cul-de-sac. External vehicular access would be taken from two points on Main Street, located approximately 744 feet apart. Eastbound vehicles entering the project site from Main Street would use the center left-turn lane, which would not result in obstruction for traffic flow on Main Street. Thus, the proposed project would not create hazards through design features or incompatible uses. Impacts would be less than significant.

**e) Result in inadequate emergency access?**

**Less than significant impact with mitigation incorporated.** The project's internal circulation system would consist of a network of six through streets and one cul-de-sac. External vehicular access would be taken from two points on Main Street. In the interests of providing emergency access from a separate street, MM TRANS-4 requires a connection for emergency vehicles from Carol Lane to the cul-de-sac. This would comply with the Fire Code's standards for emergency access. Additionally, the proposed project would not make any modifications to Main Street that would impair emergency response or evacuation. Thus, impacts would be less than significant.

**f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?**

**Less than significant impact with mitigation incorporated.** The Tri-Delta Transit provides transit service to Oakley, with three routes connecting to the Pittsburg/Bay Point Bay Area Rapid Transit (BART) station. The nearest bus stop is located approximately 700 feet east of the project site on Main Street and is within walking distance

The existing striped shoulder on Main Street allows for safe bicycle travel.

Sidewalks are provided on both sides of Carol Lane. Sidewalks are not provided on the project frontage bordering Main Street. The proposed project would install half-width improvements along Main Street that would include curb, gutter, and sidewalk. This would allow for safe and convenient pedestrian travel. Additionally, sidewalks would be provided on internal streets. The emergency vehicle access connection to Carol Lane required by MM TRANS-4 would also be accessible to bicyclists and pedestrians.

In sum, the project would not conflict with an adopted bicycle or pedestrian plan, and would not impede transit service. Thus, impacts would be less than significant.

## Mitigation Measures

**MM TRANS-1** Prior to issuance of the first building permit, the project applicant shall provide the fair share cost to the City of Oakley of the future installation of one additional eastbound through lane (thus providing three eastbound through lanes through the



intersection before narrowing to two eastbound through lanes) at the intersection of Bridgehead Road-Neroly Road/Main Street.

**MM TRANS-2** Prior to issuance of the first building permit, the project applicant shall provide the fair share cost to the City of Oakley of the future installation of one additional eastbound through lane at the intersection of Empire Avenue/Main Street.

**MM TRANS-3** Prior to issuance of the first building permit, the project applicant shall provide the fair share cost to the City of Oakley of installing a future traffic signal at the intersection of Neroly Road/Live Oak Avenue.

**MM TRANS-4** Prior to approval of the final map, shall prepare and submit plans to the City of Oakley that show an emergency vehicle access between Carol Lane and the project site.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
<b>17. Utilities and Service Systems</b> <i>Would the project:</i>				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Comply with federal, State, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

## Environmental Evaluation

Would the project:

- a) **Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?**

**Less than significant impact.** The proposed project would develop 154 dwelling units. As discussed in Impact 17(d), the proposed project is estimated to demand 94,164 gallons of water per day. Using standard industry assumptions that (1) domestic water use represents 40 percent of consumption; and (2) wastewater generation represents 90 percent of domestic water use, the proposed project would generate 33,899 gallons of effluent on a daily basis. Wastewater service is provided by Ironhouse Sanitary District, which collects, treats, or discharges municipal wastewater both generated and treated within the service area. The Water Recycling Facility has an average daily flow

of 2.3 million gallons per day (mgd). The facility has treatment has a dry weather treatment capacity of approximately 4.3 mgd. Thus, the addition of 33,899 gallons of wastewater (0.34 mgd) would represent less than 1 percent of the available capacity. Additionally, the proposed project does not have any attributes that would generate effluent that would require special treatment (e.g., process wastewater). For these reasons, the proposed project would not exceed the wastewater treatment requirements of the Water Recycling Facility. Impacts would be less than significant.

**b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?**

**Less than significant impact.** As discussed in Impact 17(a), (d), and (e), both Ironhouse Sanitary District and Diablo Water District would have adequate resources and capacity to serve the proposed project with water and wastewater, respectively. Aside from standard on-site infrastructure (e.g., service laterals), no upgrades would be required to either the water or wastewater systems. Impacts would be less than significant.

**c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?**

**Less than significant impact.** The western portion of the project site contains vineyards while the eastern portion contains undeveloped land and mature trees. Most of the project site would be hardscaped, except for the 84,077 square feet of park, open space, and bioretention basin area. The proposed project would install a storm drainage system consisting of inlets, underground piping, and a bioretention basin. The storm drainage system consists of a 42,511 square feet bioretention basin area. Runoff from the basin would be conveyed by a network of 18-inch and 24-inch-diameter pipes to the southwestern corner of the project site and discharged into an existing 42-inch-diameter storm drainage pipe, which runs parallel to the southern boundary of the project site. The storm drainage system would be designed to detain and meter the release of peak runoff in order to avoid inundating downstream waterways. Additionally, the on-site storm drainage system would include stormwater treatment features intended to prevent pollutants from leaving the project site. Collectively, these features would ensure that the proposed project would not contribute runoff that would exceed the capacity of downstream stormwater drainage systems such that new or expanded facilities would be required. Impacts would be less than significant.

**d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?**

**Less than significant impact.** The proposed project would be served with potable water service provided by the Diablo Water District. The 2015 Urban Water Management Plan sets forth a revised baseline per capita water demand rate of 177 gallons per day. The proposed project would develop 154 dwelling units. Using the City of Oakley's 2018 estimate of 3.45 persons per household, the project would accommodate 532 residents. Multiplying that value by 177 gallons per day yields a daily water consumption value of 94,164 gallons. On annual basis, that equates to 105.5 acre-feet.

The 2015 Urban Water Management Plan indicates that total supply would increase from 16,839 acre-feet in 2020 to 20,411 acre-feet in 2040. The Urban Water Management Plan water supply

projections account for planned growth within the Oakley city limits, including on the project site. Thus, the project's annual water demand of 105.5 acre-feet is accounted for in the Urban Water Management Plan and adequate long-term water supply exists. Impacts would be less than significant.

- e) **Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?**

**Less than significant impact.** As discussed in Impact 17(a), the proposed project would generate 33,899 gallons of effluent on a daily basis. The Water Recycling Facility had an average daily flow of 2.3 mgd. The facility has treatment has a dry weather treatment capacity of approximately 4.3 mgd. Thus, the addition of 33,899 gallons of wastewater would represent less than 1 percent of the available capacity. As such, the Water Recycling Facility would have adequate capacity to serve the project. Impacts would be less than significant.

- f) **Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?**

**Less than significant impact.** The proposed project would develop 154 single-family residences. Using a standard residential waste generation rate of 3,650 pounds per dwelling unit/year, development contemplated by the proposed project would generate 394 cubic yards of solid waste on an annual basis. Solid waste from Oakley is landfilled at the Keller Canyon Landfill, which has 63.4 million cubic yards of remaining capacity. Thus, the proposed project's annual waste generation would represent less than 0.001 percent of the remaining capacity. Impacts would be less than significant.

- g) **Comply with federal, State, and local statutes and regulations related to solid waste?**

**Less than significant impact.** The proposed project would be served with curbside green waste and recyclable pick-up serve, thereby furthering State and local policies associated with waste diversion and recycling. Impacts would be less than significant.

## Mitigation Measures

None.

Environmental Issues	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
<b>18. Mandatory Findings of Significance</b>				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

## Environmental Evaluation

- a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?

**Less than significant impact with mitigation incorporated.** The proposed project may result in several impacts associated with biological resources and cultural resources that would be significant if left unmitigated. MM BIO-1, MM BIO-2, MM CUL-1, and MM CUL-2 would fully mitigate all potential impacts to levels of less than significant. With the implementation of these mitigation measures, the proposed project would have less than significant impacts.

- b) Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

**Less than significant impact with mitigation incorporated.** All cumulative impacts related to air quality and noise are either less than significant after mitigation or less than significant and do not require mitigation. Given the scope of the project and its impacts and mitigation measures, the incremental effects of this project are not considerable relative to the effects of past, current, and probably future projects. As discussed previously, the project does have potential significant cumulative traffic impacts. However, MM TRANS-1, MM TRANS-2, and MM TRANS-3 would fully mitigate all potential cumulative impacts to a level of less than significant. With the implementation of these mitigation measures, the proposed project would not result in cumulatively significant impacts on these areas. Impacts would be less than significant.

- c) Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?

**Less than significant impact.** All impacts identified in this IS/MND are either less than significant after mitigation, or less than significant and do not require mitigation. Therefore, the proposed project would not result in environmental effects that cause substantial adverse effects on human beings either directly or indirectly. Impacts would be less than significant.

## Mitigation Measures

Implement MM BIO-1, MM BIO-2, MM CUL-1, MM CUL-2, MM CUL-3, MM TRANS-1, MM TRANS-2, and MM TRANS-3.

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